

ACO product catalogue

ACO Industrial Drainage



ACO. The future of drainage.



The ACO system chain provides drainage solutions which meet the future needs of industries where hygiene is essential.

In a food service environment, hot water, grease and organic waste must be counteracted by more complex and sophisticated drainage concepts. ACO achieves this with intelligent system solutions which optimise food safety, the health and safety of employees and the protection of water. Every ACO product within the ACO system chain therefore safely controls water as it passes along the chain to ensure that it can be hygienically, economically and ecologically handled in a viable way.



collect:
Collect and
remove



clean:
Pre-clean and
process



hold:
Protect and
attenuate



release:
Pump, discharge and
reuse



ACO system chain
in action

CONTENT

Introduction	4
General introduction	4
HygieneFirst	4
Hygienic design requirements	5
Hygienic design principles	6
Material - stainless steel and surface treatment	7
Standards and Certifications	8
System overview and benefits	9
Industrial Drainage selection guide	10
ACO gully	16
Introduction	18
ACO hygienic gully 142	20
ACO hygienic gully 157	34
ACO hygienic gully 218	48
ACO gully EG150	59
Gratings	61
Accessories	72
Flow rates and Construction heights	76
ACO channel	80
Introduction	82
ACO hygienic box channel	86
ACO vinyl box channel	90
ACO hygienic cast grating	93
ACO hygienic ladder grating	94
ACO mesh grating	97
Accessories for ACO hygienic box channel	99
ACO customized box channel	100
ACO slot channel	104
ACO customized slot channel	107
ACO modular box channel 125	116
Grating for ACO modular box channel 125	122
Accessories for ACO modular box channel 125	126
ACO modular box channel 200	127
Grating for ACO modular box channel 200	135
Accessories for ACO modular box channel 200	138
ACO modular slot channel 20	139
Accessories for ACO modular slot channel 20	144
ACO design channel	146
Flow rates and Construction heights	147
ACO pipe	152
Introduction	154
Straight pipes	156
Bends	163
Branches	166
Accessories	173
Flow rates	191
Operating pressures	194
Transport & handling	196
ACO fire protective solution	200
Cleaning methods	206
Typical installation examples	214
Appendix	230

General introduction

ACO is one of the World's leading drainage specialists with 60 years' experience gained across a wide range of sectors. Our passion for producing high performance products has led us to make major investments in research and development.

We are working in partnership with commercial facility owners, managers and operators. We are continuously developing our products and enhancing our expertise. We understand the critical role that drainage plays in a successful business.

Our product portfolio includes items which are fully compliant with the highest hygienic requirements. We also have a full understanding of the food industry's own standards such as HACCP and we work with bodies including the European Hygienic Engineering and Design Group (EHEDG).

ACO drainage is used in applications anywhere where hygienic, corrosion resistant and durable drainage performance is essential:

- Professional kitchens
- Food processing facilities
- Brewing, bottling and canning plants
- Chilled warehouses
- Laboratories
- Chemical and pharmaceutical industries
- Restaurants
- Schools
- Hospitals
- Hotels
- and others



Hygiene**First**

As one of the World's leading commercial drainage specialists, ACO Group understands the critical role that drainage plays in a successful commercial food preparation business. We appreciate that food safety, hygiene and cost control are all vital factors yet we also understand that for many, drainage is out of sight and therefore out of mind.

As a result, many drainage systems are not designed well. At best this leads to costly on going cleaning and maintenance, and at worst it can result in food contamination, closure of a facility and the loss – or even closure – of business. As the company that's driving the future of drainage, we are determined to change this by raising the profile of hygienic drainage and improving standards across every part of the process.

Our HygieneFirst philosophy represents our commitment to delivering products that provide ultimate hygienic performance. We design intelligent drainage solutions that minimize operational costs without compromising food safety.

Hygienic design requirements

ACO offers sustainable, integrated drainage systems which are designed to protect business, the environment and ultimately public health. Our aim is to improve constantly every aspect of safety, hygiene and functional performance. We believe that our systems and services are truly unique, delivering unparalleled benefits to everyone involved in project delivery or subsequent operation.

ACO hygienic drainage fulfils stringent hygienic requirements to prevent harmful bacteria contamination. We apply relevant hygienic design principles that are reserved for food contact surfaces EN 1672, EN ISO 14159 and EHEDG documents No. 8, 13 and 44 to the design of our drainage products.

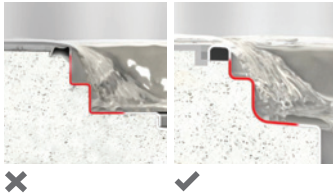
Hygienic design
Full drainability The outlet is in lowest position. Sleek slope functionality provides a fully drainable solution.
Round internal corners Minimum radius of internal corners is 3mm.
Hygienic joints Butt welds are fully welded. Metal-to-metal contact at non-disassembled joints is avoided. Sealed joints are designed to prevent accumulation of soil and bacteria.
Edge infill The channel frame edge is filled with a waterproof material.

Material
Stainless steel grade min. 1.4301 according to EN 10088 (304 according to AISI).
Fully pickled and passivated or electropolished.

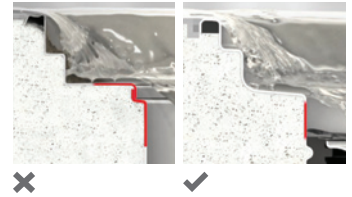
Hygienic design principles

Hygienic design

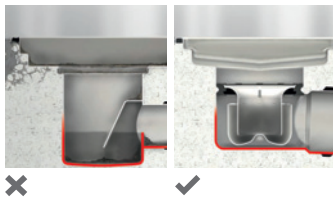
All internal radii equal or larger than 3 mm which greatly increases cleaning effectiveness



Hygienic joints: deep-drawn body ensures smooth contours eliminating crevices that can harbour dangerous bacteria



Dry sump design, completely drainable - eliminating stagnant water, smells, microbial growth and potential chemical hazards.



Edge in-fill ensures stable and durable transmission between the gully and surrounding floor and helps to minimise the risk of floor cracks which could harbour microorganism



Material

Stainless steel

Stainless steel is the name given to a wide range of steels which have the characteristics of greatly enhanced corrosion resistance over conventional mild and low alloy steels. The enhanced corrosion resistance of stainless steel essentially comes from the addition of at least 11% of chromium, however most stainless steels commonly used contain around 18% of chromium. Other significant alloying elements include nickel and for superior corrosion resistant properties, molybdenum.

Stainless steel has the following unique advantages:

- High corrosion resistance
- Non-porous, easy to clean and disinfect
- Aesthetically pleasing
- Resistant to temperature extremes and thermal shock
- Coefficient of linear expansion similar to concrete
- 100% recyclable material

ACO drainage is manufactured from austenitic stainless steel, grades 1.4301 or 1.4404 according to EN 10088 (304 or 316L according to AISI) and is ideal for applications including food processing, leisure, dairy, brewing, pharmaceutical, chemical and petrochemical industries.

Surface treatment of stainless steel

The process cutting, forming and welding stainless steel will introduce impurities into the surface of the material and unless the appropriate action is taken, the material will begin to corrode and ultimately fail in service. Therefore after fabrication, it is vital that stainless steel is treated with the correct surface treatment to ensure it is fully corrosion resistant. By applying pickle passivation as the primary surface treatment, the corrosion resistance of stainless steel can be fully restored to its original state, ensuring long and reliable life performance together with the required aesthetic appearance.

Finishes used by ACO include:

Pickle passivation (acid treatment)

All ACO drainage is pickle passivated by immersing products in a series of acid baths. This is a fundamental requirement for removing iron embedded particulates introduced in the fabrication process and also for restoring the chromium depleted regions generated by the welding process. ACO has one of the largest and most advanced pickle passivation installation in Europe which ensures the optimum corrosion resistance of our products.

Electropolishing (electrochemical process)

After pickle passivation, some products are then immersed in an electrolytic fluid in which the products become the anode of a direct current electrical circuit. This process is characterized by a selective attack of the surface of the components whereby upstanding roughness is preferentially dissolved and will yield a progressively smoother, brighter surface. All hygienic box channel grates are electro-polished as a standard.

Brushing (mechanical process)

ACO channels have brushed upper edge for aesthetical reasons.

Standards and Certifications

ACO gully and ACO channel

ACO gully and ACO channel ranges are designed, manufactured, tested and certified in accordance with EN 1253. Furthermore ACO modular channels are also certified in accordance with EN 1433 and they are CE marked.

We apply the relevant hygienic design principles reserved for food contact surfaces EN 1672, EN ISO 14159 and EHEDG documents No. 8, 13 and 44.

ACO fire protective kit is tested according to EN 1366-2 (Fire resistance tests for service installations) and classified according to EN 13501 (Fire classification of construction products and building elements).

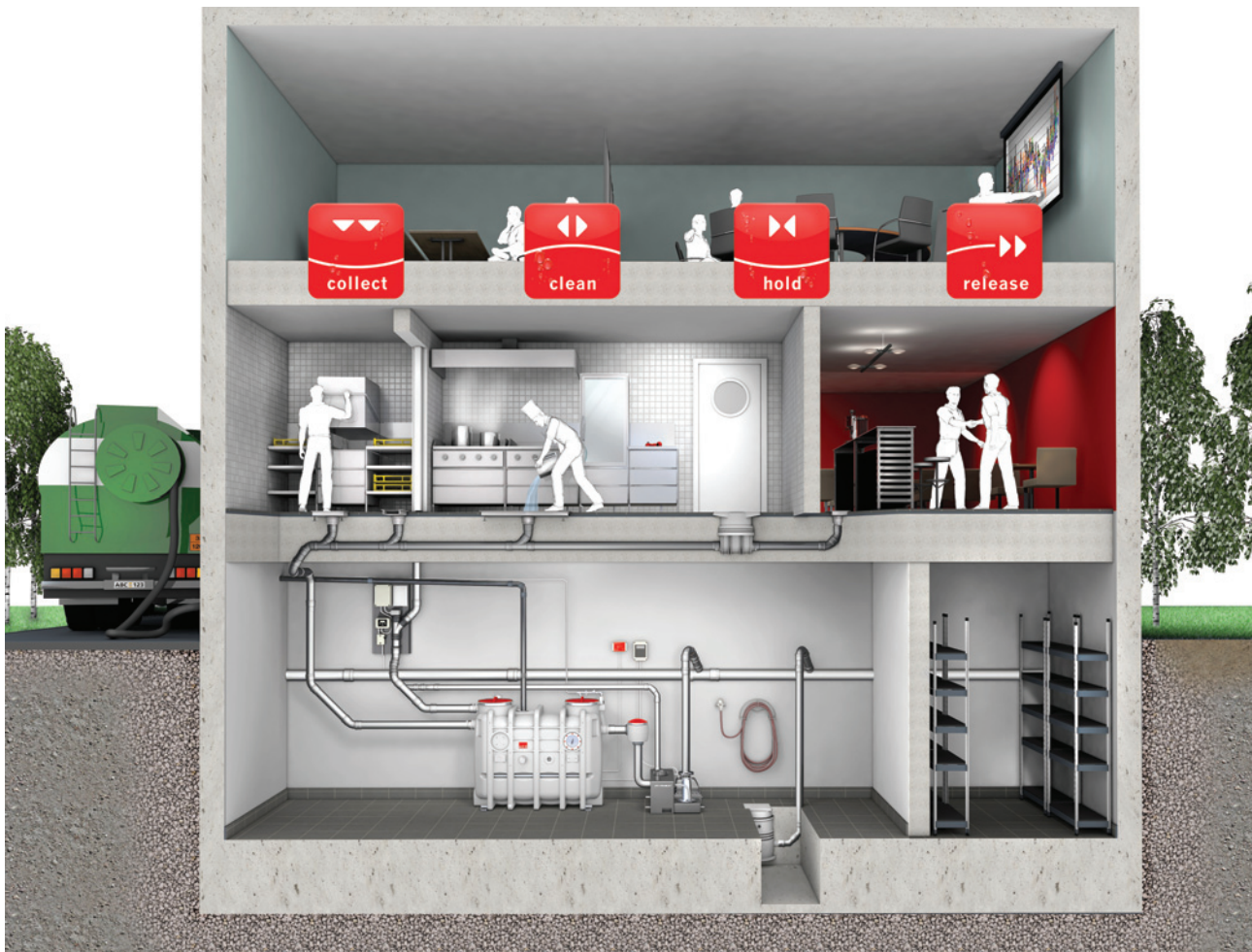
ACO pipe

The ACO pipe push-fit system is classified and certified as non-combustible product and is manufactured in compliance with EN 1124. This standard classifies the ACO pipe systems as class A1 fire resistant (highest rating).

ACO pipe systems are certified also by SITAC authority as fire resistant (cert. no. 0410-01).

Special certificate of fire resistance for coated pipes (no. CSI PK-13-083) is available.

System overview and benefits



Benefits

ACO provides solutions which optimise food safety, employee's health and safety and water protection. Every ACO product therefore safely controls the water to ensure that it can be hygienically, economically and ecologically managed in a viable way.

Food safety

- ACO hygienic drainage fulfils hygienic requirements to prevent harmful bacteria contamination. We apply relevant hygienic design principles reserved for food contact surfaces as recommended by EHEDG.
- Our product design ensures minimal build-up of food particles and debris as well as a safe connection with the surrounding floor to minimise any opportunity for bacteria to grow throughout the drainage system.
- Sleek slope function and hygienically designed products ensure our system is fully drainable eliminating the stagnant odour of waste water.

Cost control

- ACO drainage systems can be easily maintained, reducing associated cleaning costs thanks to their functional design and cleaning recommendations which have been developed in partnership with premium cleaning agent suppliers.
- ACO's advanced manufacturing technologies ensure durability and our special surface treatment guarantees corrosion resistance. Our systems perform effectively at all times and keep disruption to a minimum.
- We provide expertise in drainage system planning, correct installation and creating a safe connection with the surrounding floor to avoid unnecessary cost.

Health & Safety

- For additional safety in high risk areas that require heavy water usage; slip resistant grating is available.
- Each component of the drainage system is easy to remove and clean, and there are no sharp edges for optimum employee's safety.
- ACO drainage products have a fire resistant solution certified according to EN 136.

Industrial Drainage selection guide

Application

The layout of the drainage system as well as the design of drainage items has an impact on future operational effectiveness as well as on costs. This guide offers a range of basic areas which need to be considered when specifying a drainage system.

To specify an appropriate drainage system for a particular application, the zone of operation, amount and frequency of water used is crucial.

	Zones with high risk for food safety	Zones with medium or low risk for food safety	Zones without direct risk for food safety
Wet process / Wet cleaning	- Hygienic design - one piece solution without connections; ladder or cast gratings - High retention - high flow rate - Slip resistant - high requirement	- Hygienic design - connections and mesh gratings could be considered if cleaning and sanitation procedures allow - High retention - high flow rate - Slip resistant - high requirement	- Hygienic design is recommended for easy cleaning and maintenance; combination of products could be considered for easy layout design - High retention - high flow rate - Slip resistant - high requirement
Dry process / Wet cleaning	- Hygienic design - one piece solution without connections; ladder or cast gratings - High flow rate - Slip resistant - medium requirement	- Hygienic design - connections and mesh gratings could be considered if cleaning and sanitation procedures allow - High retention - high flow rate - High flow rate - Slip resistant - medium requirement	- Hygienic design is recommended for easy cleaning and maintenance; combination of products could be considered for easy layout design - High flow rate - Slip resistant - medium requirement
Dry process / Controlled wet cleaning	- Hygienic design - one piece solution without connections; ladder or cast or odour proof gratings - Medium to low flow rate	- Hygienic design - connections and mesh gratings could be considered if cleaning and sanitation procedures allow - Medium to low flow rate - Odour proof cover	- Hygienic design is recommended for easy cleaning and maintenance; combination of products could be considered for easy layout design - Medium to low flow rate - Odour proof cover

Drainage type

Based on the basic application, the type of drainage needs to be selected according to the layout of the operational space and technology employed.

Point drainage	Linear drainage
	

Material resistance

The chemical mixture of the waste water from the process and/or from the cleaning as well as the temperature of the final mixture influences the material resistance of the drainage system.

ACO drainage is manufactured from austenitic stainless steel; grades 1.4301 or 1.4404 according to EN 10088 (304 or 316L according to AISI) and is ideal for applications within food processing, dairy, brewery, commercial kitchen, pharmaceutical, chemical, petrochemical industries and leisure.

Beside stainless steel, drainage products contain also sealing materials:

ACO gullies – all the seals are made of NBR (acryl nitrile-butadiene rubber)

ACO box and slot channels – flange connection seals are made of NBR (acryl nitrile-butadiene rubber)

ACO modular box and slot channels – flange connection seals are made of NBR (acryl nitrile-butadiene rubber)

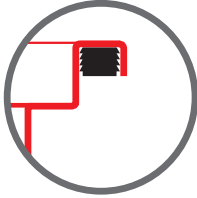
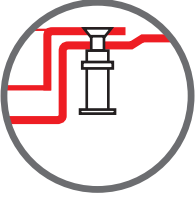
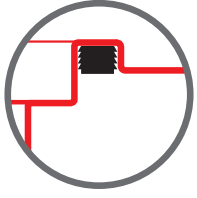
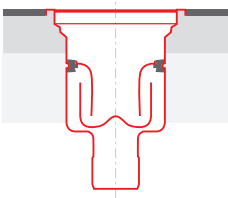
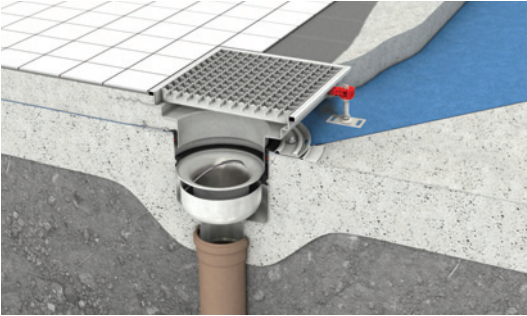
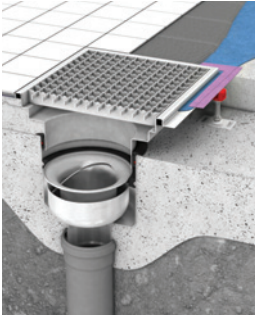
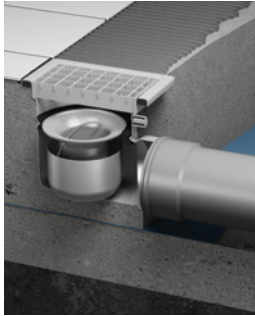
ACO pipes – socket seals can be made from either EPDM (ethylene propylene diene monomer) or FPM (fluoroelastomer) – Viton.

For details of material resistance see page 226 or contact our Sales/Technical department.

Floor structure and finish

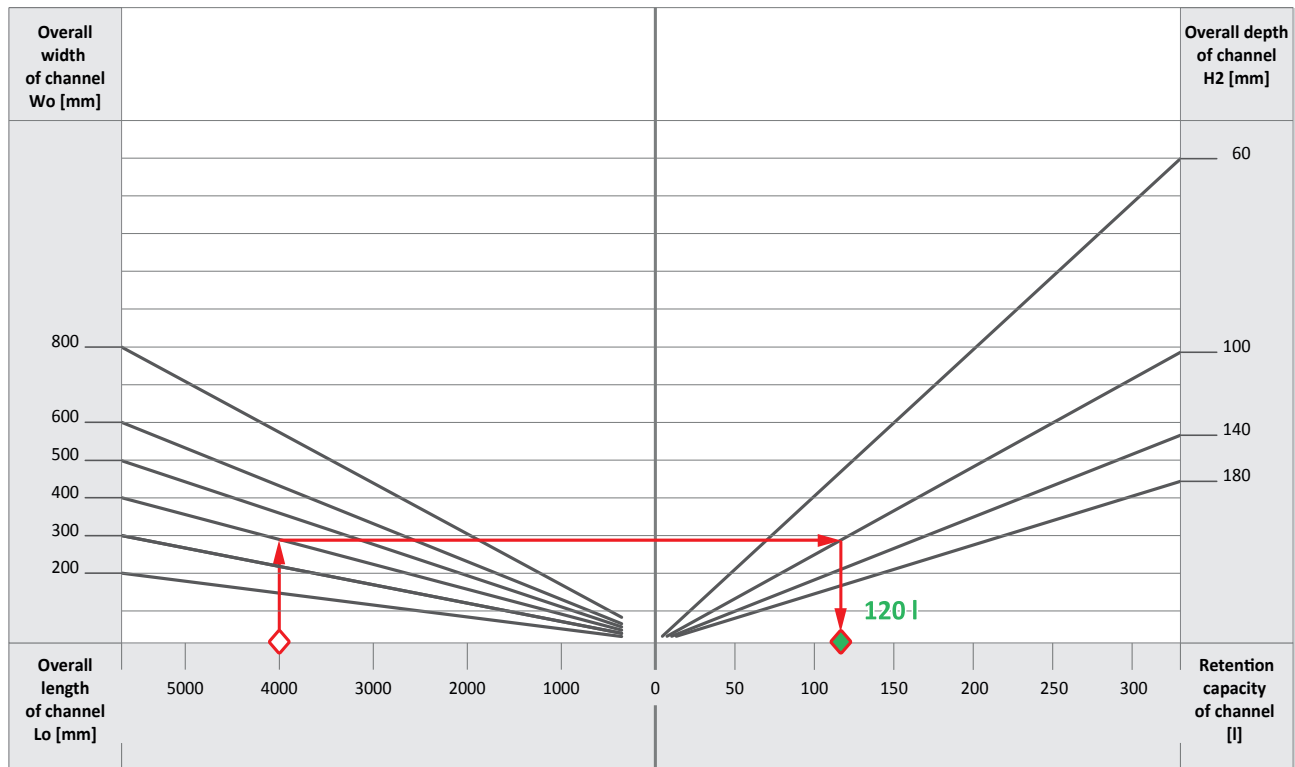
Depending on the composition of the floor construction; the appropriate type of gully or channel should be selected. If there is insulation in the floor structure, the O-ring needs to be removed from the friction ring, which will allow the water from the insulation to be drained to the gully body.

Depending on the floor finish; the appropriate edge of the channel or gully top should be selected.

Floor finish Channel or gully edge	Channels + Telescopic gullies			Fixed height gully
	Tiled, concrete or resin floor Standard edge	Vinyl Vinyl edge	Tiled (thin bed installation) Extended edge	Tiled, concrete or resin floor Standard edge
Channel or gully top drawing				
Waterproof membrane connection	Connected to gully body		Connected to channel / gully top	Independent of the gully
Installation example				
Gully body type	Telescopic adjustable Adhesive bonding flange or mechanical clamping flange		Telescopic adjustable Location flange	Fixed height gully
Gully body picture				

Retention capacity

Depending on the application, the appropriate retention capacity should be considered.

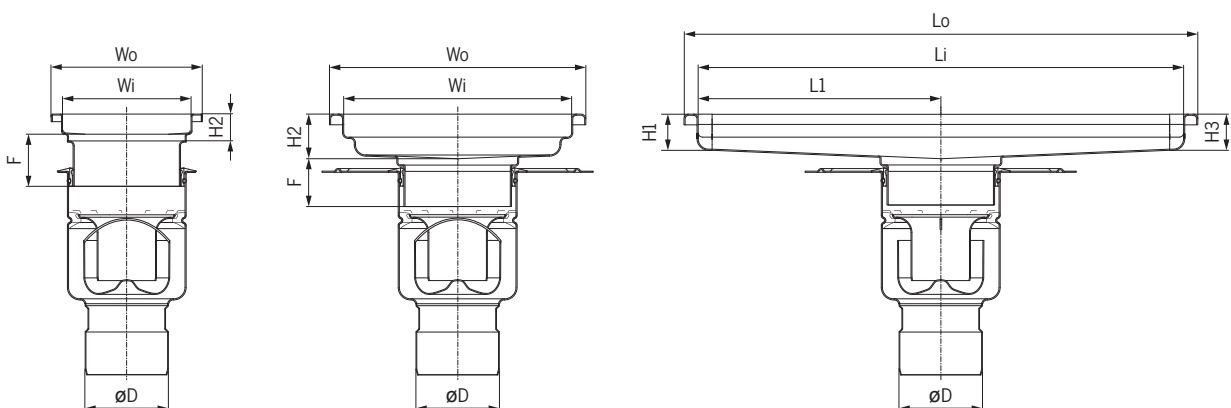


Example: channel length 4000mm, width 400mm, depth 100mm, retention capacity 120l.

Channel geometry

Based on the retention capacity considered, as well as the floor structure, the particular dimensions of a channel or gully top (for telescopic solution) need to be specified.

For the channel a construction height at the outlet position as well as the position of the outlet and the height of the endcaps has to be defined.



Flow rates

Flow rates reflect the system's ability to constantly drain a certain amount of water. Flow rate is generally defined by the ACO gully size.

Flow rates			
Outlet position	Gully type	Outlet diameter [mm]	Minimal flow rate [l/s]
Vertical outlet	142	70/75	1.4
		100/110	1.6
	157	70/75	2.7
		100/110	3.5
	218	100/110	5.0
		150/160	5.0
	EG150	70/75	1.2
		100/110	1.2
Horizontal outlet	142	70/75	1.4
		100/110	1.6
	157	70/75	2.6
		100/110	2.8
	218	100/110	4.4
		100/110	4.4
	EG150	70/75	1.2
		70/75	1.2

Flow rates are measured according to EN 1253. Flow rate performance is without silt basket (flow rates with empty silt basket are approximately 15% lower than the values stated)

Accessories

For the collection of solid parts, the gully or channel should be fitted with a silt basket.

Telescopic connection without flange for waterproofing	Telescopic connection with flange for waterproofing		
ACO gully EG150	ACO hygienic gully 142	ACO hygienic gully 157	ACO hygienic gully 218
Accessories delivered as standard with the gully			
Friction ring	- Friction ring - FAT - FAT support	- Friction ring - FAT - FAT support	- Friction ring - FAT - FAT support
Optional accessories			
- Sieve - FAT with silt basket - FAT	- Silt basket for fixed height gully 0.3 l - Silt basket for telescopic gully 0.4 l	- Silt basket for vertical gully 0.6 l - Silt basket for horizontal gully 0.3 l	- Silt basket for vertical gully 1.4 l - Silt basket for horizontal gully 0.7 l

Gratings

For the choice of the appropriate grating, the following properties have to be considered:

- Hygiene (cleanability)
- Load class
- Slip resistant

	Cast grating	Ladder grating		Mesh grating	
	Antislip	Antislip	Plain	Antislip	Plain
Slip resistant Pendulum test BS 7976-2	Low	Low	Moderate	Low	Moderate
Slip resistant Ramp test DIN 51130	R13	R11	R9	R11	R9
Load classes	M 125	R 50, M 125	R 50, M 125	L 15	L 15

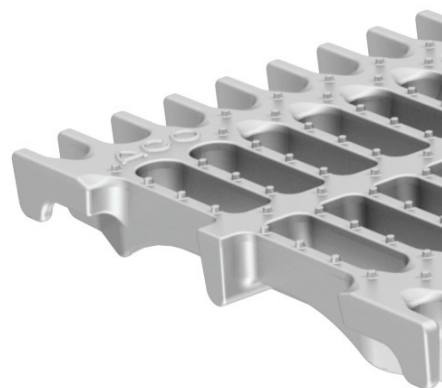
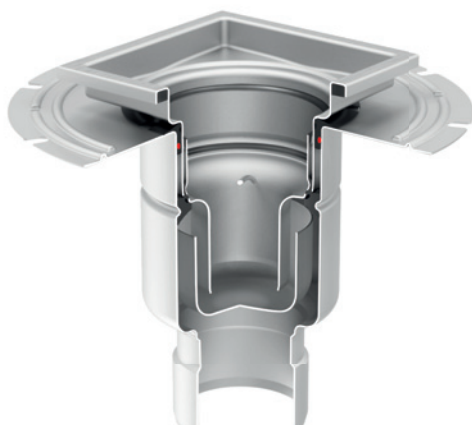
Load class

Though it is recommended to avoid traffic across the drainage items to minimize risk of floor/drainage connection failures by dynamic loading; proper load class defined by grating has to be considered based on the defined traffic during future operation.

Load class Application	Load class according to EN 1253	Description
	L 15	Areas with light vehicular traffic, such as: ▪ In commercially used premises and public areas
	R 50*	Areas with vehicular traffic, such as: ▪ In commercially used premises and factories
	M 125	Areas with vehicular traffic such as: ▪ Workshops, factories & car parks
	N 250*	Heavy duty industrial areas subject to forklift traffic, such as: ▪ Food processing areas, chemical or process plants

* New load classes in EN 1253-1 (enter into force in 2015)





ACO gully

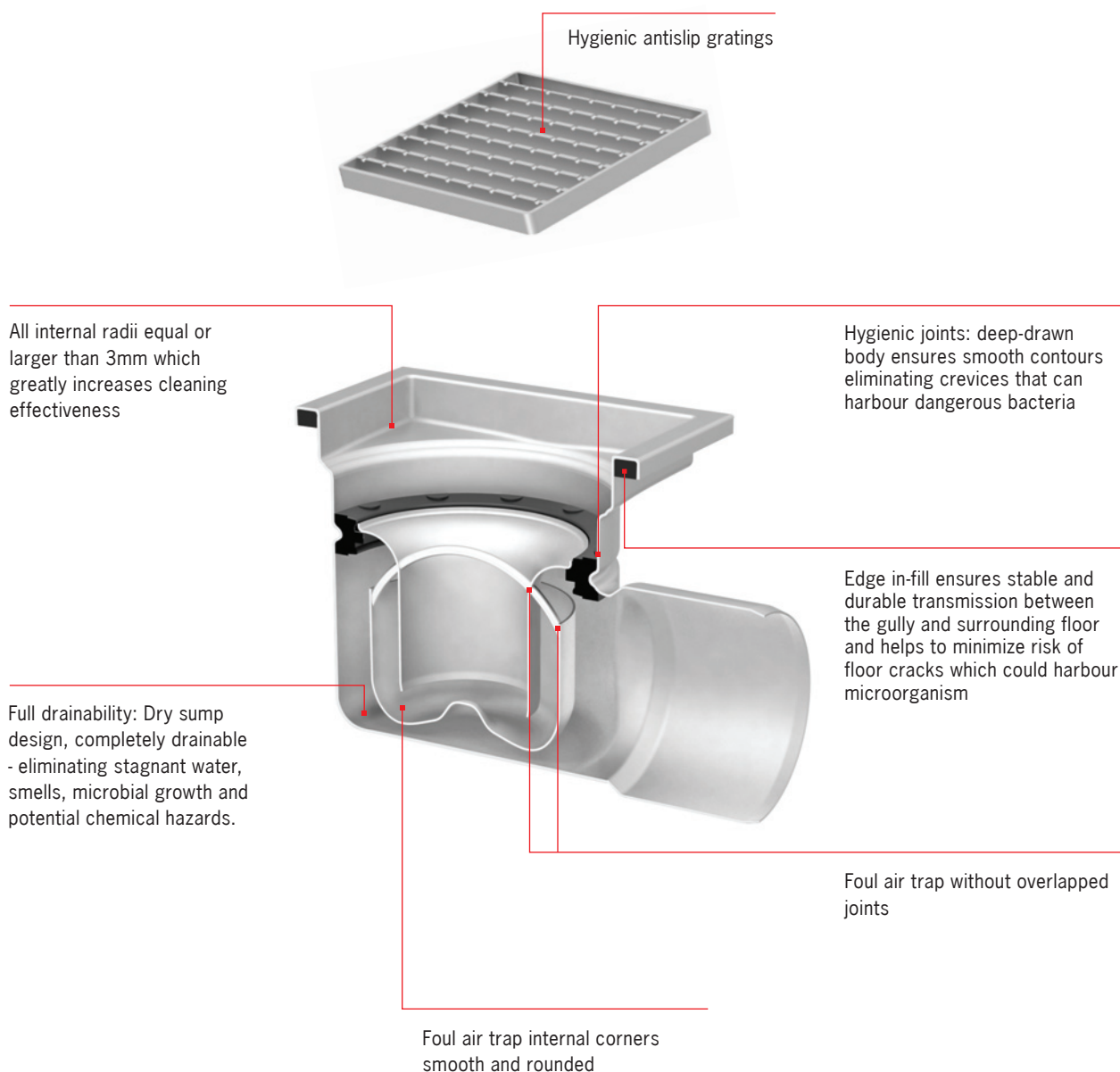
		Page
ACO gully	Introduction	Hygienic design 18
		System overview 19
	ACO hygienic gully 142	Fixed height – vertical outlet 20
		Fixed height – horizontal outlet 22
		Telescopic – vertical outlet 24
		Telescopic – horizontal outlet 27
		Gully top – telescopic 30
		Raising piece – telescopic 33
	ACO hygienic gully 157	Fixed height – vertical outlet 34
		Fixed height – horizontal outlet 37
		Telescopic – vertical outlet 39
		Telescopic – horizontal outlet 42
		Gully top – telescopic 45
		Raising piece – telescopic 47
	ACO hygienic gully 218	Fixed height – vertical outlet 48
		Fixed height – horizontal outlet 50
		Telescopic – vertical outlet 51
		Telescopic – horizontal outlet 54
		Gully top – telescopic 56
		Raising piece – telescopic 58
	ACO gully EG150	Telescopic – vertical outlet 59
		Telescopic – horizontal outlet 60
	Gratings	Gratings for gully top 200 x 200 61
		Gratings for gully top 250 x 250 64
		Gratings for gully top 300 x 300 67
		Gratings for vinyl top Ø170 70
		Gratings for vinyl top Ø222 71
	Accessories	Accessories for ACO hygienic gully 142 72
		Accessories for ACO hygienic gully 157 73
		Accessories for ACO hygienic gully 218 74
		Accessories for ACO gully EG150 75
	Flow rates and Construction heights	Flow rates and Construction heights 76

Hygienic design

ACO hygienic drainage fulfils strongest hygienic requirements to prevent harmful bacterial contamination. We apply the relevant hygienic design principles reserved for food processing equipment EN 1672, EN ISO 14159 and EHEDG document No. 8, 13 and 44 to the gully design.

ACO gully hygienic features:

- Full drainability
- Internal radii equal or larger than 3 mm
- Hygienic joints
- Edge infill
- Stainless steel grade min. 1.4301 according to EN 10088 (304 according to AISI)
- Fully pickled and passivated



System overview

ACO gully range is available in a number of versions featuring different flow rates, grating designs, sizes and spigot outlet diameters to suit various applications.

The floor construction and depth together with the use of any waterproofing membrane play an important role in the selection of the appropriate type of gully.

The ACO gully range is available with vertical or horizontal spigot outlets.

Fixed height gullies are convenient and free-standing units which are suitable for cementitious, resin or tiled floors.

Telescopic gullies can be installed either with a gully top or ACO channel in most flooring constructions, including floors with waterproofing membranes.

Fixed height solution



- 1** Gratings
- 2** Silt basket
- 3** Foul air trap
- 4** Foul air trap support
- 5** ACO gully body
- 6** Gully top
- 7** Friction ring
- 8** Leveling feet

Telescopic solution



Fixed height – vertical outlet

Product information

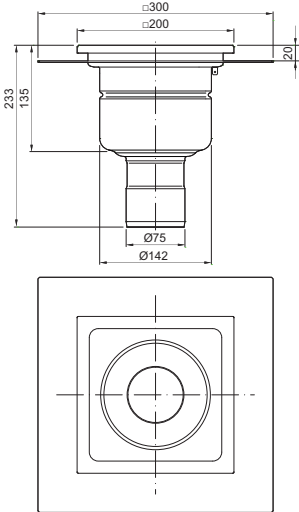
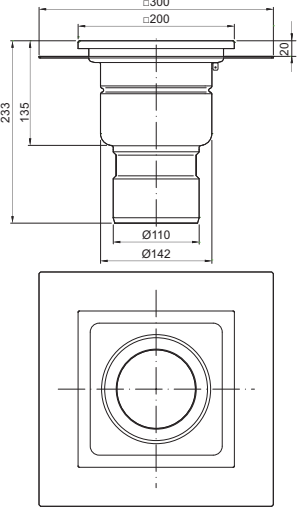
Fixed height gully can be specified as a point drainage in areas where waterproofing is independent of the gully body. Those gullies can be combined with different grates depending on requested load class.

- Hygienic design following EN 1672, EN ISO 14159 and EHEDG document No. 8, 13 and 44
- Tested and certified according to EN 1253
- Available in 1.4301 (304) or 1.4404 (316L) grades of stainless steel
- Fire tested and certified solution available for classes EI 90 – EI 180 (EN 13 501-2)
- Fully removable and easily cleanable stainless steel foul air trap (FAT)
- Outlet diameter DN 70/DN 100 (75 mm or 110 mm O.D.)
- Wide range of gratings including antislip solution



Order information

	Top size □ [mm]	Outlet diameter Ø [mm]	Foul air trap	Material	Item number
Standard					
	200 x 200	75	Without FAT	1.4301	414700
				1.4404	414800
			With FAT	1.4301	414701
				1.4404	414801
	200 x 200	110	Without FAT	1.4301	414702
				1.4404	414802
			With FAT	1.4301	414703
				1.4404	414803

	Top size □ [mm]	Outlet diameter Ø [mm]	Foul air trap	Material	Item number
Extended edge					
	200 x 200	75	With FAT	1.4301	414744
				1.4404	414844
	200 x 200	110	With FAT	1.4301	414745
				1.4404	414845

Fixed height – horizontal outlet

Product information

Fixed height gully can be specified as a point drainage in areas where waterproofing is independent of the gully body. Those gullies can be combined with different grates depending on requested load class.

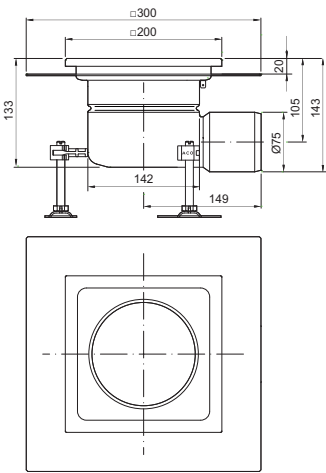
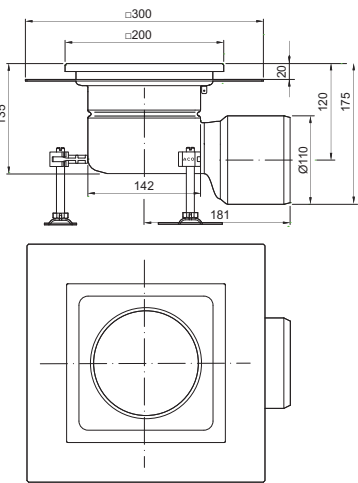
- Hygienic design following EN 1672, EN ISO 14159 and EHEDG document No. 8, 13 and 44
- Tested and certified according to EN 1253
- Available in 1.4301 (304) or 1.4404 (316L) grades of stainless steel
- Fully removable and easily cleanable stainless steel foul air trap (FAT)
- Outlet diameter DN 70/DN 100 (75 mm or 110 mm O.D.)
- Wide range of gratings including antislip solution



Order information

	Top size □ [mm]	Outlet diameter Ø [mm]	Foul air trap	Material	Item number
Standard edge					
	200 x 200	75	Without FAT	1.4301	414704
				1.4404	414804
			With FAT	1.4301	414705
				1.4404	414805
	200 x 200	110	Without FAT	1.4301	414706
				1.4404	414806
			With FAT	1.4301	414707
				1.4404	414807

ACO hygienic gully 142
Fixed height – horizontal outlet

	Top size □ [mm]	Outlet diameter Ø [mm]	Foul air trap	Material	Item number
Extended edge					
	200 x 200	75	With FAT	1.4301	414746
				1.4404	414846
	200 x 200	110	With FAT	1.4301	414747
				1.4404	414847

Telescopic – vertical outlet

Product information

Telescopic gully can be combined either with gully tops or with linear drainage channels.

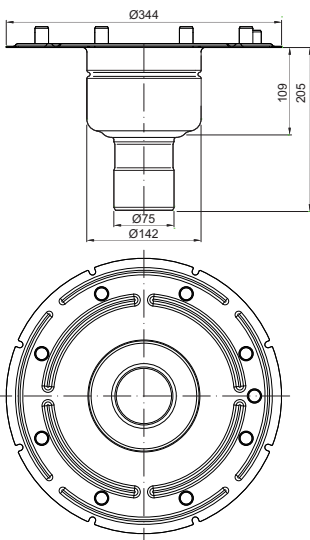
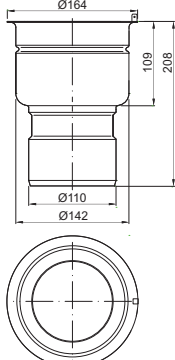
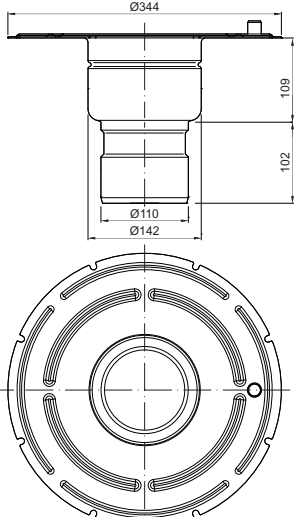
Telescopic solution enables height and rotational adjustment of connected gully top or channel. Gullies are equipped with flanges for connection of waterproof membrane.

- Hygienic design following EN 1672, EN ISO 14159 and EHEDG document No. 8, 13 and 44
- Tested and certified according to EN 1253
- Available in 1.4301 (304) or 1.4404 (316L) grades of stainless steel
- Fire tested and certified solution available for classes EI 90 – EI 180 (EN 13 501-2)
- Fully removable and easily cleanable stainless steel foul air trap (FAT)
- Outlet diameter DN 70/DN 100 (75 mm or 110 mm O.D.)
- Telescopic friction ring included
- Wide range of gratings including antislip solution



Order information

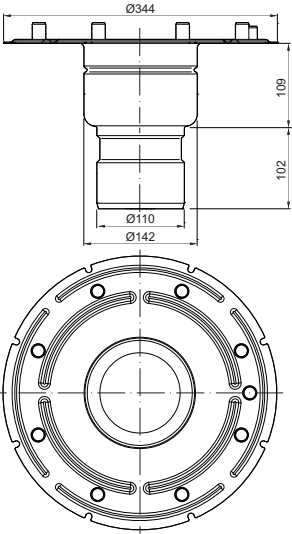
	Type of flange	Outlet diameter Ø [mm]	Foul air trap	Material	Item number
	Location flange	75	Without FAT	1.4301	414708
				1.4404	414808
			With FAT	1.4301	414709
				1.4404	414809
	Adhesive bonding flange	75	Without FAT	1.4301	414710
				1.4404	414810
			With FAT	1.4301	414711
				1.4404	414811

	Type of flange	Outlet diameter Ø [mm]	Foul air trap	Material	Item number
	Mechanical clamping flange	75	Without FAT	1.4301	414712
				1.4404	414812
			With FAT	1.4301	414713
				1.4404	414813
	Location flange	110	Without FAT	1.4301	414714
				1.4404	414814
			With FAT	1.4301	414715
				1.4404	414815
	Adhesive bonding flange	110	Without FAT	1.4301	414716
				1.4404	414816
			With FAT	1.4301	414717
				1.4404	414817

ACO hygienic gully 142

Telescopic – vertical outlet

ACO gully

	Type of flange	Outlet diameter Ø [mm]	Foul air trap	Material	Item number
	Mechanical clamping flange	110	Without FAT	1.4301	414718
				1.4404	414818
			With FAT	1.4301	414719
				1.4404	414819

Telescopic – horizontal outlet

Product information

Telescopic gully can be combined either with ACO gully top or ACO channel in most flooring constructions.

Telescopic solution enables height and rotational adjustment of connected gully top or channel. Gullies are equipped with flanges for connection of waterproof membrane.

- Hygienic design following EN 1672, EN ISO 14159 and EHEDG document No. 8, 13 and 44
- Tested and certified according to EN 1253
- Available in 1.4301 (304) or 1.4404 (316L) grades of stainless steel
- Gully top frame size: 200 x 200 mm
Outlet diameter DN 70/DN 100 (75 mm or 110 mm O.D.)
- Gully body with location flange or integrated membrane flange for either adhesive bonding or mechanical clamp
- Telescopic friction ring included

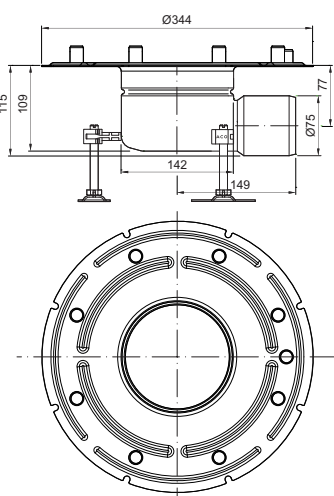
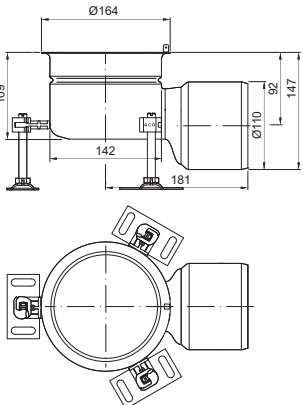
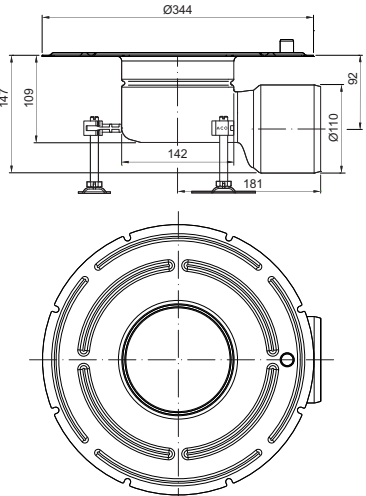


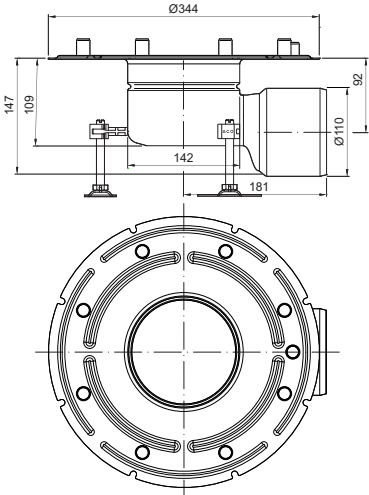
Order information

	Type of flange	Outlet diameter Ø [mm]	Foul air trap	Material	Item number
	With location flange	75	Without FAT	1.4301	414720
				1.4404	414820
			With FAT	1.4301	414721
				1.4404	414821
	With adhesive bonding flange	75	Without FAT	1.4301	414722
				1.4404	414822
			With FAT	1.4301	414723
				1.4404	414823

ACO hygienic gully 142

Telescopic – horizontal outlet

	Type of flange	Outlet diameter Ø [mm]	Foul air trap	Material	Item number
	With mechanical clamping flange	75	Without FAT	1.4301	414724
				1.4404	414824
			With FAT	1.4301	414725
				1.4404	414825
	With location flange	110	Without FAT	1.4301	414726
				1.4404	414826
			With FAT	1.4301	414727
				1.4404	414827
	With adhesive bonding flange	110	Without FAT	1.4301	414728
				1.4404	414828
			With FAT	1.4301	414729
				1.4404	414829

	Type of flange	Outlet diameter Ø [mm]	Foul air trap	Material	Item number
	With mechanical clamping flange	110	Without FAT	1.4301	414730
				1.4404	414830
			With FAT	1.4301	414731
				1.4404	414831

Gully top – telescopic

Product information

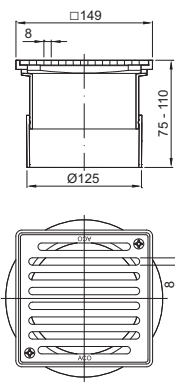
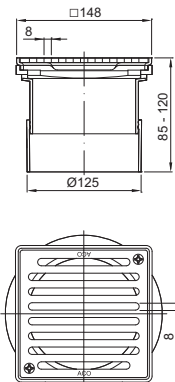
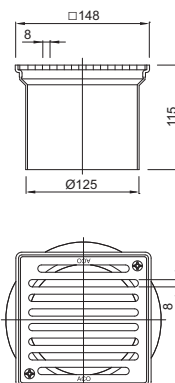
Gully top can be combined with telescopic gully. Different gully top types are available depending on floor structure.

- Available in 1.4301 (304) or 1.4404 (316L) grades of stainless steel
- Wide range of gratings to load class L 15 – M 125 (EN 1253) or C 250 (EN 124) including antislip solution



Order information

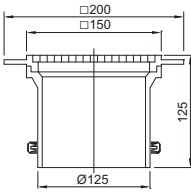
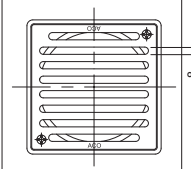
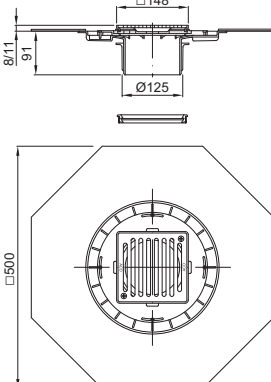
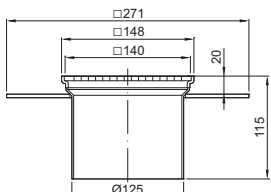
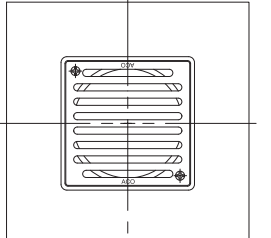
	Gully top type	Gully top size □ [mm]	Material	Item number
	Standard edge	200 x 200	1.4301	414732
			1.4404	414832
	Extended edge	200 x 200	1.4301	414734
			1.4404	414834
	Extended top with drainage holes	200 x 200	1.4301	414735
			1.4404	414835

	Gully top type	Gully top size □ [mm]	Material	Item number
	Plastic top with stainless steel grating (K3)	149 x 149	Plastic	414903 *
	MEKU top with stainless steel grating (K3)	148 x 148	Plastic	414904 *
	Square top with stainless steel grating (K3)	148 x 148	1.4301	414905 *

* Hygienic design following EN 1672, EN ISO 14159 and EHEDG document No. 8, 13 and 44 not applied.

ACO hygienic gully 142

Gully top – telescopic

	Gully top type	Gully top size □ [mm]	Material	Item number
 	Plastic top with stainless steel grating (K3)	150 x 150	Plastic	414906 *
	Plastic thin-bed top with sliding frame and stainless steel grating (K3)	148 x 148	Plastic	414907 *
 	Square top with sanded flange and stainless steel grating (K3)	148 x 148	1.4301	414909 *

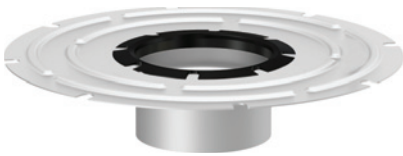
* Hygienic design following EN 1672, EN ISO 14159 and EHEDG document No. 8, 13 and 44 not applied.

Raising piece – telescopic

Product information

Raising piece can be used for floor structures where multi waterproofing is needed (heat insulation) or where construction height of the slab needs to be increased.

- Variety of flanges for membranes
- Available in grades 1.4301 (304) or 1.4404 (316L) of stainless steel



Order information

	Type of flange	Material	Item number
	Location flange	1.4301	414736
		1.4404	414836
	Adhesive bonding flange	1.4301	414737
		1.4404	414837
	Mechanical clamping flange	1.4301	414738
		1.4404	414838

Fixed height – vertical outlet

Product information

Fixed height gully can be specified as a point drainage in areas where waterproofing is independent of the gully body. Those gullies can be combined with different grates depending on requested load class.

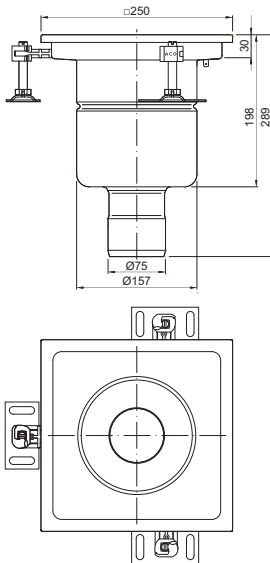
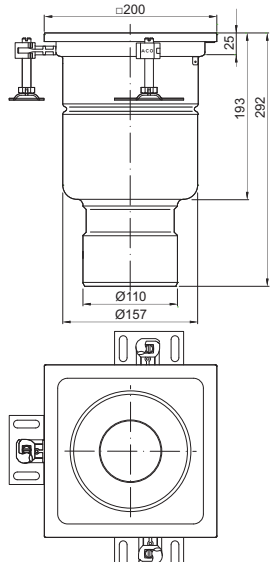
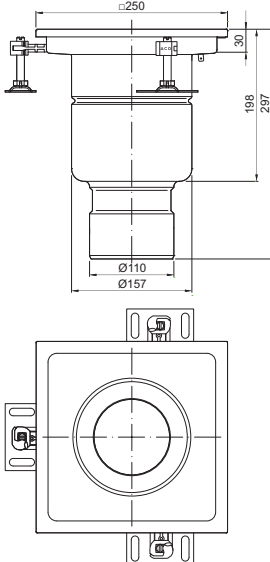
- Hygienic design following EN 1672, EN ISO 14159 and EHEDG document No. 8, 13 and 44
- Tested and certified according to EN 1253
- Available in 1.4301 (304) or 1.4404 (316L) grades of stainless steel
- Wide range of gratings including antislip solution
- Fully removable stainless steel FAT
- Fire tested and certified solution available for classes EI 90 – EI 180 (EN 13 501-2)
- Gully top frame size: 200 x 200 mm or 250 x 250 mm
- Outlet diameter DN 70/DN 100 (75 mm or 110 mm O.D.)



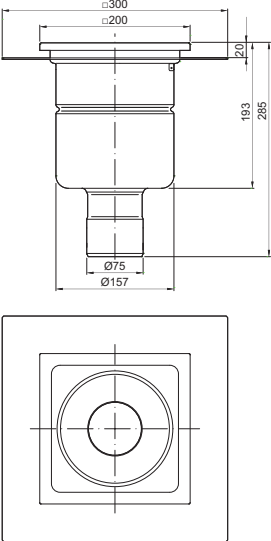
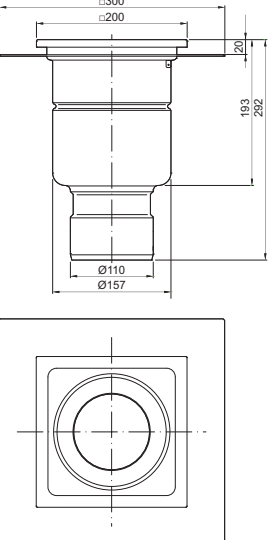
Order information

	Top size □ [mm]	Outlet diameter Ø [mm]	Foul air trap	Material	Item number
Standard edge					
	200 x 200	75	Without FAT	1.4301	408000
				1.4404	408100
			With FAT	1.4301	408001
				1.4404	408101

ACO hygienic gully 157
Fixed height – vertical outlet

	Top size □ [mm]	Outlet diameter Ø [mm]	Foul air trap	Material	Item number
	250 x 250	75	Without FAT	1.4301	408016
				1.4404	408116
			With FAT	1.4301	408017
				1.4404	408117
	200 x 200	110	Without FAT	1.4301	408002
				1.4404	408102
			With FAT	1.4301	408003
				1.4404	408103
	250 x 250	110	Without FAT	1.4301	408018
				1.4404	408118
			With FAT	1.4301	408019
				1.4404	408119

ACO hygienic gully 157
Fixed height – vertical outlet

	Top size □ [mm]	Outlet diameter Ø [mm]	Foul air trap	Material	Item number
Extended edge					
	200 x 200	75	With FAT	1.4301	408047
				1.4404	408147
	200 x 200	110	With FAT	1.4301	408099
				1.4404	408199

Fixed height – horizontal outlet

Product information

Fixed height gully can be specified as a point drainage in areas where waterproofing is independent of the gully body.

Those gullies can be combined with different grates depending on requested load class.

- Hygienic design following EN 1672, EN ISO 14159 and EHEDG document No. 8, 13 and 44
- Tested and certified according to EN 1253
- Available in 1.4301 (304) or 1.4404 (316L) grades of stainless steel
- Gully top frame size: 200 x 200 mm or 250 x 250 mm
- Outlet diameter DN 70/DN 100 (75 mm or 110 mm O.D.)
- Wide range of gratings including antislip solution

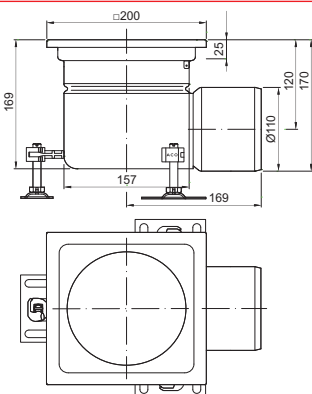
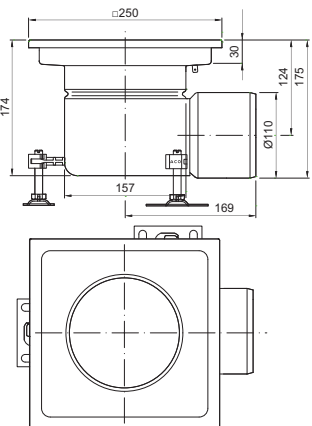
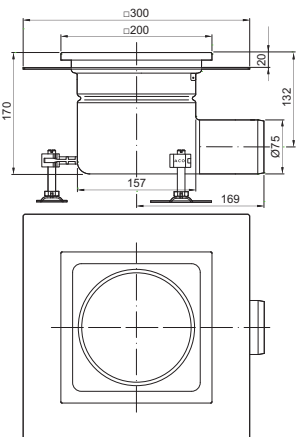
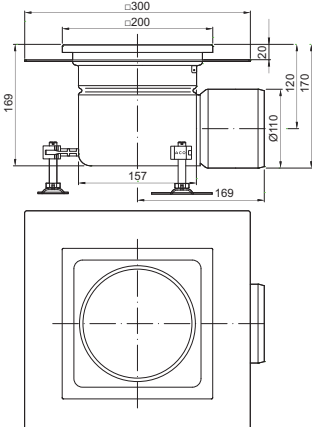


Order information

	Top size □ [mm]	Outlet diameter Ø [mm]	Foul air trap	Material	Item number
Standard edge					
	200 x 200	75	Without FAT	1.4301	408008
				1.4404	408108
			With FAT	1.4301	408009
				1.4404	408109
	250 x 250	75	Without FAT	1.4301	408024
				1.4404	408124
			With FAT	1.4301	408025
				1.4404	408125

ACO hygienic gully 157

Fixed height – horizontal outlet

	Top size □ [mm]	Outlet diameter Ø [mm]	Foul air trap	Material	Item number
	200 x 200	110	Without FAT	1.4301	408010
				1.4404	408110
			With FAT	1.4301	408011
				1.4404	408111
	250 x 250	110	Without FAT	1.4301	408026
				1.4404	408126
			With FAT	1.4301	408027
				1.4404	408127
Extended edge					
	200 x 200	75	With FAT	1.4301	408014
				1.4404	408114
	200 x 200	110	With FAT	1.4301	408015
				1.4404	408115

Telescopic – vertical outlet

Product information

Telescopic gully can be combined either with gully top or ACO channel in most flooring constructions.

Telescopic solution enables height and rotational adjustment of connected gully top or channel. Gullies are equipped with flanges for connection of waterproof membrane.

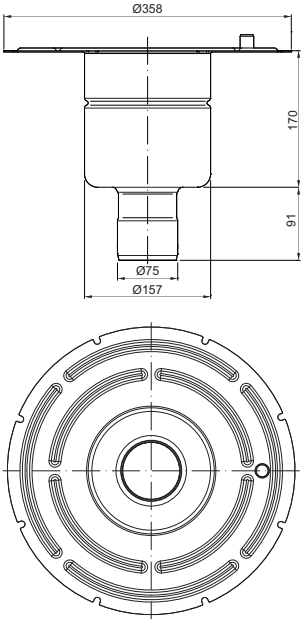
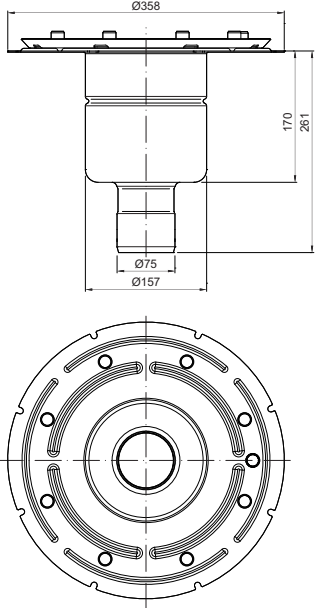
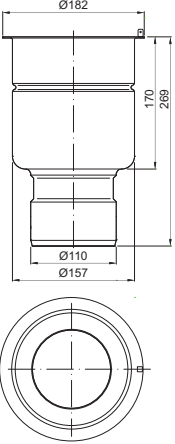
- Hygienic design following EN 1672, EN ISO 14159 and EHEDG document No. 8, 13 and 44
- Tested and certified according to EN 1253
- Available in 1.4301 (304) or 1.4404 (316L) grades of stainless steel
- Gully top frame size: 200 x 200 mm or 250 x 250 mm
- Outlet diameter DN 70/DN 100 (75 mm or 110 mm OD)
- Telescopic friction ring included
- Gully body with location flange or integrated membrane flange for either adhesive bonding or mechanical clamp
- Fire tested and certified solution available for classes EI 90 – EI 180 (EN 13 501-2)

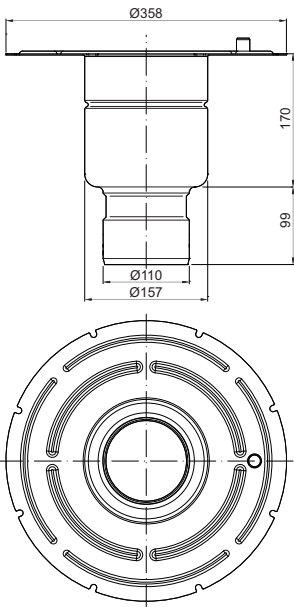
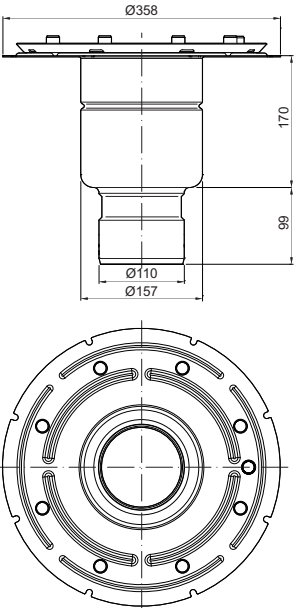


Order information

	Type of flange	Outlet diameter Ø [mm]	Foul air trap	Material	Item number
	Location flange	75	Without FAT	1.4301	408048
				1.4404	408148
			With FAT	1.4301	408049
				1.4404	408149

ACO hygienic gully 157
Telescopic – vertical outlet

	Type of flange	Outlet diameter Ø [mm]	Foul air trap	Material	Item number
	Adhesive bonding flange	75	Without FAT	1.4301	408050
				1.4404	408150
			With FAT	1.4301	408051
				1.4404	408151
	Mechanical clamping flange	75	Without FAT	1.4301	408052
				1.4404	408152
			With FAT	1.4301	408053
				1.4404	408153
	Location flange	110	Without FAT	1.4301	408054
				1.4404	408154
			With FAT	1.4301	408055
				1.4404	408155

	Type of flange	Outlet diameter Ø [mm]	Foul air trap	Material	Item number
	Adhesive bonding flange	110	Without FAT	1.4301	408056
				1.4404	408156
			With FAT	1.4301	408057
				1.4404	408157
	Mechanical clamping flange	110	Without FAT	1.4301	408058
				1.4404	408158
			With FAT	1.4301	408059
				1.4404	408159

Telescopic – horizontal outlet

Product information

Telescopic gully can be combined either with gully top or ACO channel in most flooring constructions.

Telescopic solution enables height and rotational adjustment of connected gully top or channel. Gullies are equipped with flanges for connection of waterproof membrane.

- Hygienic design following EN 1672, EN ISO 14159 and EHEDG document No. 8, 13 and 44
- Tested and certified according to EN 1253
- Available in 1.4301 (304) or 1.4404 (316L) grades of stainless steel
- Suitable for all floor types including vinyl flooring
- Outlet diameter DN 70/DN 100 (75 mm or 110 mm OD)
- Telescopic friction ring included
- Gully body with location flange or integrated membrane flange for either adhesive bonding or mechanical clamp

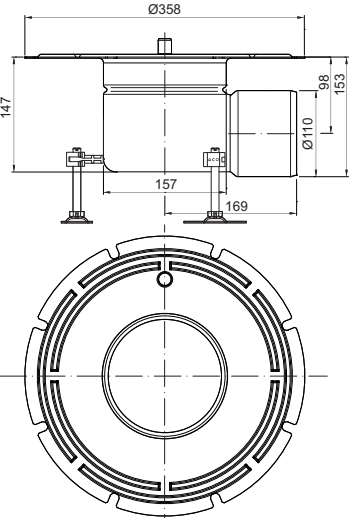
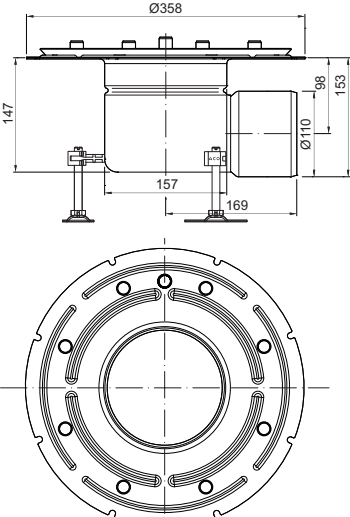


Order information

	Type of flange	Outlet diameter Ø [mm]	Foul air trap	Material	Item number
	Location flange	75	Without FAT	1.4301	408072
				1.4404	408172
			With FAT	1.4301	408073
				1.4404	408173

	Type of flange	Outlet diameter Ø [mm]	Foul air trap	Material	Item number
	Adhesive bonding flange	75	Without FAT	1.4301	408074
				1.4404	408174
			With FAT	1.4301	408075
				1.4404	408175
	Mechanical clamping flange	75	Without FAT	1.4301	408076
				1.4404	408176
			With FAT	1.4301	408077
				1.4404	408177
	Location flange	110	Without FAT	1.4301	408078
				1.4404	408178
			With FAT	1.4301	408079
				1.4404	408179

ACO hygienic gully 157
Telescopic – horizontal outlet

	Type of flange	Outlet diameter Ø [mm]	Foul air trap	Material	Item number
	Adhesive bonding flange	110	Without FAT	1.4301	408080
				1.4404	408180
			With FAT	1.4301	408081
				1.4404	408181
	Mechanical clamping flange	110	Without FAT	1.4301	408082
				1.4404	408182
			With FAT	1.4301	408083
				1.4404	408183

Gully top – telescopic

Product information

Gully top can be combined with telescopic gully. Different gully top type is available depending on floor structure.

- Hygienic design following EN 1672, EN ISO 14159 and EHEDG document No. 8, 13 and 44
- Square gully tops 200 x 200 or 250 x 250 for load class L 15; M 125 or C 250
- Available in grades 1.4301 (304) or 1.4401 (316L) of stainless steel
- Wide range of gratings to Load Class L 15 – M 125 (EN 1253) or C 250 (EN 124) including antislip solution

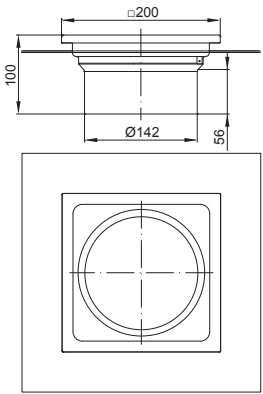
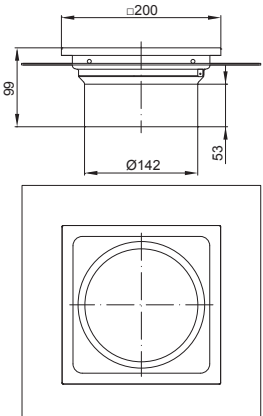
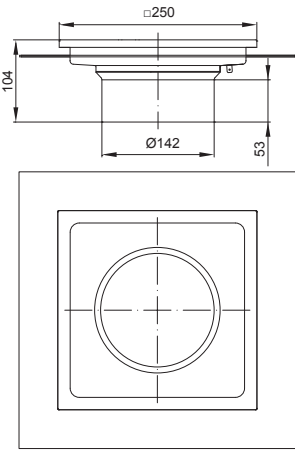
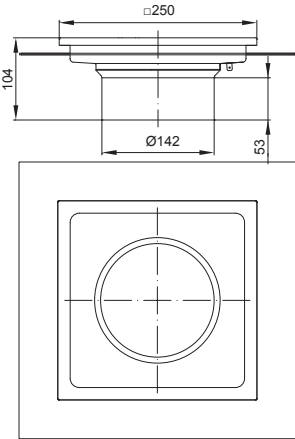


Order information

	Gully top type	Gully top size [mm]	Material	Item number
	Standard edge	□ 200 x 200	1.4301	408208
			1.4404	408218
	Standard edge	□ 250 x 250	1.4301	408248
			1.4404	408258
	Vinyl edge	Ø289	1.4301	408240*
			1.4404	408250*

* Hygienic design following EN 1672, EN ISO 14159 and EHEDG document No. 8, 13 and 44 not applied.

ACO hygienic gully 157
Telescopic – horizontal outlet

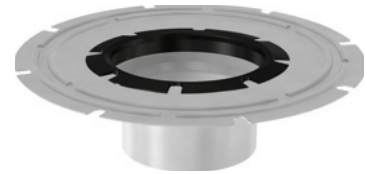
	Gully top type	Gully top size [mm]	Material	Item number
	Extended edge	□ 200 x 200	1.4301	408241
			1.4404	408251
	Extended edge with drainage holes	□ 200 x 200	1.4301	408244
			1.4404	408254
	Extended edge	□ 250 x 250	1.4301	408245
			1.4404	408255
	Extended edge with drainage holes	□ 250 x 250	1.4301	408246
			1.4404	408256

Raising piece – telescopic

Product information

Raising piece can be used for floor structures where multi waterproofing is needed (heat insulation) or where construction height of the slab needs to be increased.

- Variety of flanges for membranes
- Available in grades 1.4301 (304) or 1.4404 (316L) of stainless steel



Order information

	Type of flange	Material	Item number
	Location flange	1.4301	408249
		1.4404	408259
	Adhesive bonding flange	1.4301	408206
		1.4404	408216
	Mechanical clamping flange	1.4301	408207
		1.4404	408217

Fixed height – vertical outlet

Product information

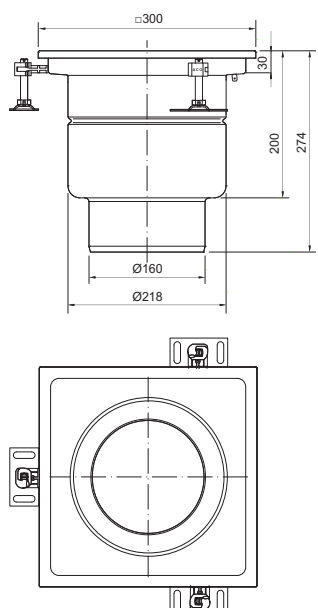
Fixed height gully can be specified as a point drainage in areas where waterproofing is independent of the gully body. Those gullies can be combined with different grates depending on requested load class.

- Hygienic design following EN 1672, EN ISO 14159 and EHEDG document No. 8, 13 and 44
- Tested and certified according to EN 1253
- Available in 1.4301 (304) or 1.4404 (316L) grades of stainless steel
- Gully top frame size: 300 x 300 mm
- Outlet diameter DN 100/DN 150 (110 mm or 160 mm OD)
- Fully removable stainless steel FAT
- Tested and certified according to EN 1253
- Fire tested and certified solution available for classes EI 90 – EI 180 (EN 13 501)
- Wide range of gratings to Load Class L 15 – M 125 (EN 1253) or C 250 (EN 124) including antislip solution



Order information

	Top size □ [mm]	Outlet diameter Ø [mm]	Foul air trap	Material	Item number
Standard edge					
	300 x 300	110	Without FAT	1.4301	408004
				1.4404	408104
			With FAT	1.4301	408005
				1.4404	408105

	Top size □ [mm]	Outlet diameter Ø [mm]	Foul air trap	Material	Item number
	300 x 300	160	Without FAT	1.4301	408006
				1.4404	408106
			With FAT	1.4301	408007
				1.4404	408107

Fixed height – horizontal outlet

Product information

Fixed height gully can be specified as a point drainage in areas where waterproofing is independent of the gully body. Those gullies can be combined with different grates depending on requested load class.

- Hygienic design following EN 1672, EN ISO 14159 and EHEDG document No. 8, 13 and 44
- Stainless steel construction for durability and long life
- Wide range of gratings to load class L 15 – M 125 (EN 1253) or C 250 (EN 124)
- Available in 1.4301 (304) or 1.4404 (316L) grades of stainless steel
- Gully top frame size: 300 x 300 mm
- Outlet diameter DN 100 (110 mm OD)
- Tested and certified according to EN 1253
- Wide range of gratings to Load Class L 15 – M 125 (EN 1253) or C 250 (EN 124) including antislip solution



Order information

	Top size □ [mm]	Outlet diameter Ø [mm]	Foul air trap	Material	Item number
Standard edge					
	300 x 300	110	Without FAT	1.4301	408012
				1.4404	408112
			With FAT	1.4301	408013
				1.4404	408113

Telescopic – vertical outlet

Product information

Telescopic gully can be combined either with ACO gully top or ACO channel in most flooring constructions.

Telescopic solution enables height and rotational adjustment of connected gully top or channel. Gullies are equipped with flanges for connection of waterproof membrane.

- Hygienic design following EN 1672, EN ISO 14159 and EHEDG document No. 8, 13 and 44
- Fully removable stainless steel FAT
- Fire tested and certified solution available for classes EI 90 – EI 180 (EN 13 501)
- Available in 1.4301 (304) or 1.4404 (316L) grades of stainless steel
- Outlet diameter DN 100/DN 150 (110 mm or 160 mm OD)
- Gully body with location flange or integrated membrane flange for either adhesive bonding or mechanical clamp
- Telescopic friction ring included

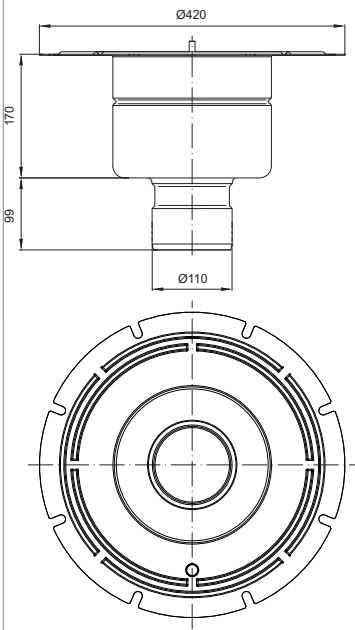
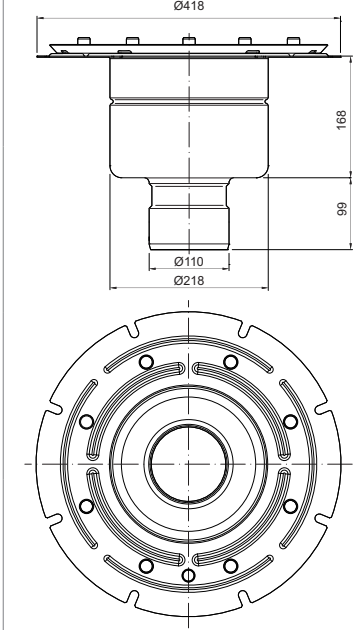


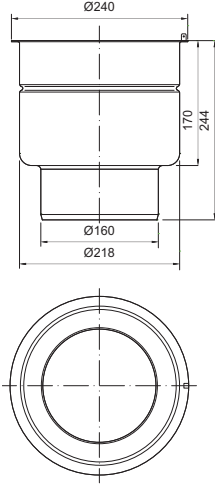
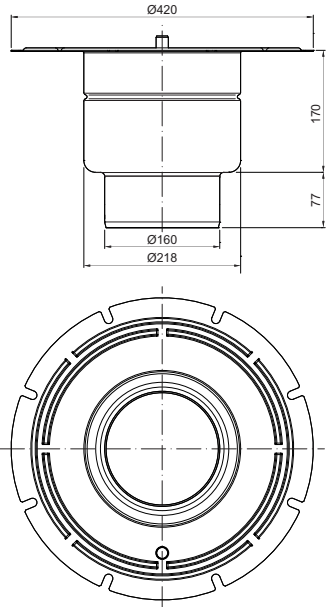
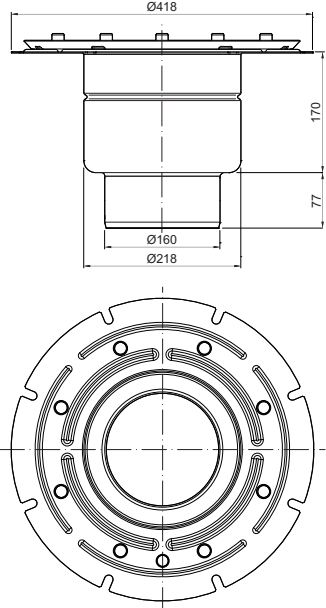
Order information

	Type of flange	Outlet diameter Ø [mm]	Foul air trap	Material	Item number
	Location flange	110	Without FAT	1.4301	408060
				1.4404	408160
			With FAT	1.4301	408061
				1.4404	408161

ACO hygienic gully 218

Telescopic - vertical outlet

	Type of flange	Outlet diameter Ø [mm]	Foul air trap	Material	Item number
	Adhesive bonding flange	110	Without FAT	1.4301	408062
				1.4404	408162
			With FAT	1.4301	408063
				1.4404	408163
	Mechanical clamping flange	110	Without FAT	1.4301	408064
				1.4404	408164
			With FAT	1.4301	408065
				1.4404	408165

	Type of flange	Outlet diameter Ø [mm]	Foul air trap	Material	Item number
	Location flange	160	Without FAT	1.4301	408066
				1.4404	408166
			With FAT	1.4301	408067
				1.4404	408167
	Adhesive bonding flange	160	Without FAT	1.4301	408068
				1.4404	408168
			With FAT	1.4301	408069
				1.4404	408169
	Mechanical clamping flange	160	Without FAT	1.4301	408070
				1.4404	408170
			With FAT	1.4301	408071
				1.4404	408171

Telescopic – horizontal outlet

Product information

Telescopic gully can be combined either with gully top or ACO channel in most flooring constructions.

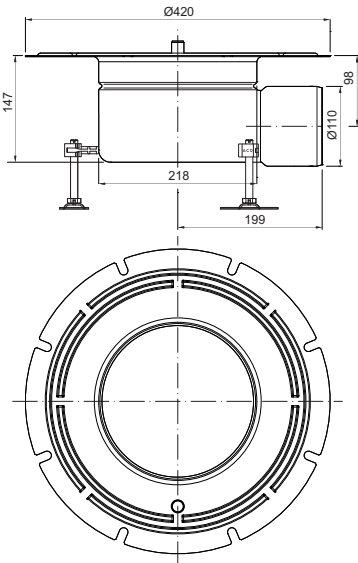
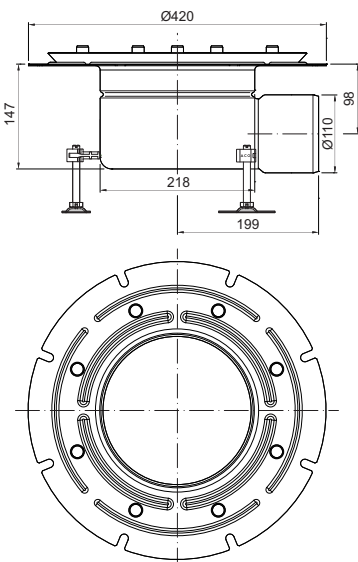
Telescopic solution enables height and rotational adjustment of connected gully top or channel. Gullies are equipped with flanges for connection of waterproof membrane.

- Hygienic design following EN 1672, EN ISO 14159 and EHEDG document No. 8, 13 and 44
- Fully removable stainless steel FAT
- Available in 1.4301 (304) or 1.4404 (316L) grades of stainless steel
- Outlet diameter DN 100 (110 mm OD)
- Gully body with location flange or integrated membrane flange for either adhesive bonding or mechanical clamp
- Tested and certified according to EN 1253



Order information

	Type of flange	Outlet diameter Ø [mm]	Foul air trap	Material	Item number
	Location flange	110	Without FAT	1.4301	408084
				1.4404	408184
			With FAT	1.4301	408085
				1.4404	408185

	Type of flange	Outlet diameter Ø [mm]	Foul air trap	Material	Item number
	Adhesive bonding flange	110	Without FAT	1.4301	408086
				1.4404	408186
			With FAT	1.4301	408087
				1.4404	408187
	Mechanical clamping flange	110	Without FAT	1.4301	408088
				1.4404	408188
			With FAT	1.4301	408089
				1.4404	408189

Gully top – telescopic

Product information

Gully top can be combined with telescopic gully. Different gully top type is available depending on floor structure.

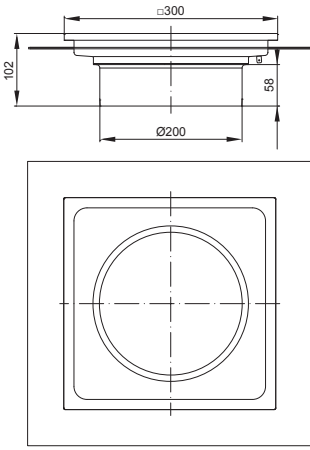
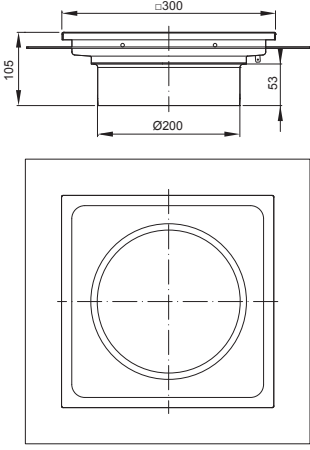
- Hygienic design following EN 1672 and EN ISO 14159 requirements
- Square gully tops 300 x 300 for load class L15; M 125 or C250
- Available in grades 1.4301 (304) or 1.4401 (316L) of stainless steel



Order information

	Gully Top type	Gully Top size Ø [mm]	Material	Item number
	Standard edge	300 x 300	1.4301	408228
			1.4404	408238
	Vinyl edge	Ø350	1.4301	408242 *
			1.4404	408252 *

* Hygienic design following EN 1672, EN ISO 14159 and EHEDG document No. 8, 13 and 44 not applied.

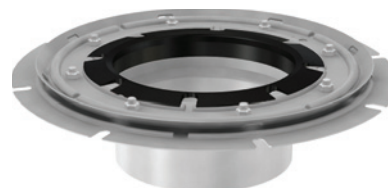
	Gully Top type	Gully Top size Ø [mm]	Material	Item number
	Extended edge	300 x 300	1.4301	408243
			1.4404	408253
	Extended edge with drainage holes	300 x 300	1.4301	408247
			1.4404	408257

Raising piece – telescopic

Product information

Raising piece can be used for floor structures where multi waterproofing is needed (heat insulation) or where construction height of the slab needs to be increased.

- Variety of flanges for membranes
- Available in grades 1.4301 (304) or 1.4404 (316L) of stainless steel



Order information

	Type of flange	Material	Item number
	Location flange	1.4301	408209
		1.4404	408219
	Adhesive bonding flange	1.4301	408226
		1.4404	408236
	Mechanical clamping flange	1.4301	408227
		1.4404	408237

Telescopic – vertical outlet

Product information

ACO gully EG150 can be combined with ACO channel with outlet diameter 110 mm. Fault air trap needs to be ordered separately.

- Stainless steel construction for durability and long life



Order information

	FAT	Material	Item number
	Without FAT	1.4301	405066 *
		1.4404	402663 *
	Without FAT	1.4301	408805 *
		1.4404	405312 *

* Hygienic design following EN 1672, EN ISO 14159 and EHEDG document No. 8, 13 and 44 not applied.

Telescopic – horizontal outlet

Product information

ACO gully EG150 can be combined with ACO channel with outlet diameter 110 mm. Fault air trap needs to be ordered separately.

- Stainless steel construction for durability and long life



Order information

	FAT	Material	Item number
	Without FAT	1.4301	406677*
		1.4404	405311*

* Hygienic design following EN 1672, EN ISO 14159 and EHEDG document No. 8, 13 and 44 not applied.

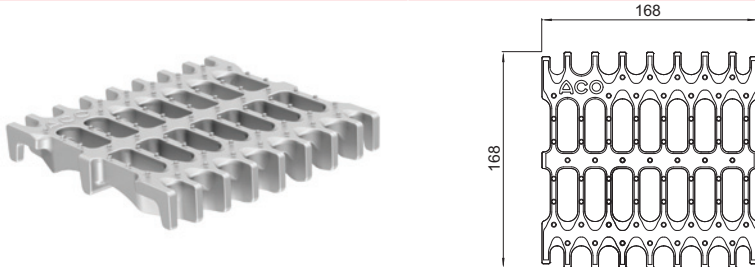
Gratings for gully top 200 x 200 mm

Product information

Variety of grate types is available depending on application and requested load class. For applications with high hygienic demands ladder grate or cast grate should be selected.

- Hygienic design following EN 1672, EN ISO 14159 and EHEDG document No. 8, 13 and 44
- Fits to stainless steel gully, fully compliant to EN 1253
- Available in 1.4301 (304) or 1.4404 (316L) grades of stainless steel
- Gully top frame size: 200 x 200 mm
- Gratings suitable to load class R50 (5 000 kg) - M125 (EN 1253) or N250 (EN 124) including antislip

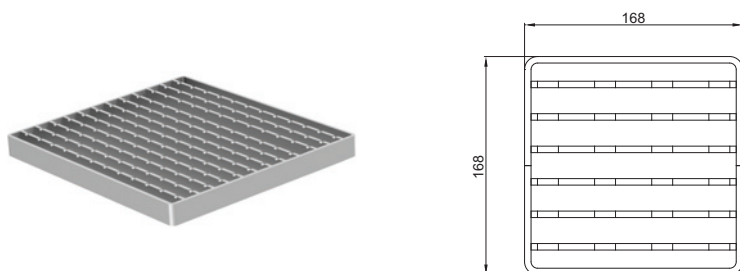
ACO hygienic cast grating



Load class	Slip resistant	Material	Item number
M 125	Yes	1.4301	416942

Note: Surface electropolished

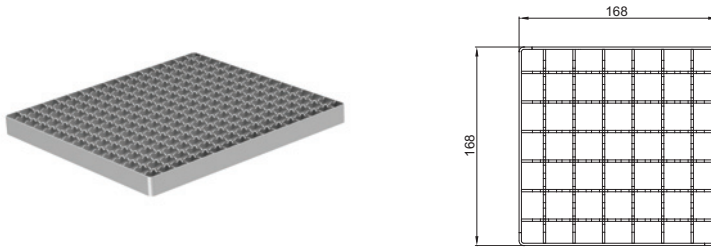
ACO hygienic ladder grating



Load class	Slip resistant	Material	Item number
R 50	Yes	1.4301	416912
		1.4404	416913
M 125	Yes	1.4301	408093
		1.4404	408193
C 250	No	1.4301	408043
		1.4404	408143

Note: Surface electropolished

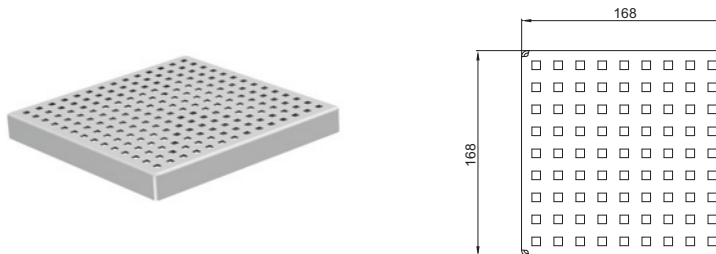
ACO mesh grating



Load class	Slip resistant	Material	Item number
L 15	Yes	1.4301	408090 *
		1.4404	408190 *
	No	1.4301	408091 *
		1.4404	408191 *

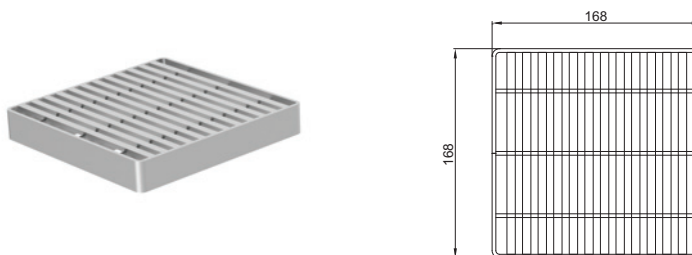
Note: Surface electropolished

ACO quadrato grating



Load class	Slip resistant	Material	Item number
L 15	No	1.4301	408092 *
		1.4404	408192 *

ACO heelsafe grating



Load class	Slip resistant	Material	Item number
L 15	No	1.4301	408022 *
		1.4404	408122 *

* Hygienic design following EN 1672, EN ISO 14159 and EHEDG document No. 8, 13 and 44 not applied.

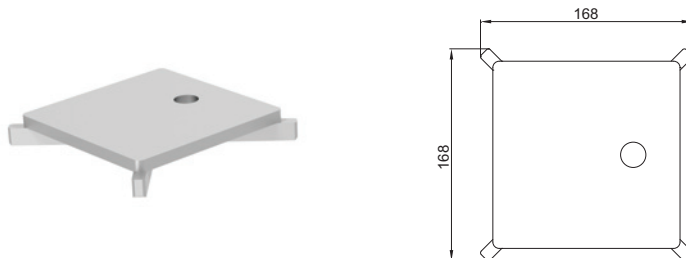
ACO multi-slot 5 grating



Load class	Slip resistant	Material	Item number
L 15	Yes	1.4301	408094 *
		1.4404	408194 *

Note: Surface electropolished

ACO slot cover

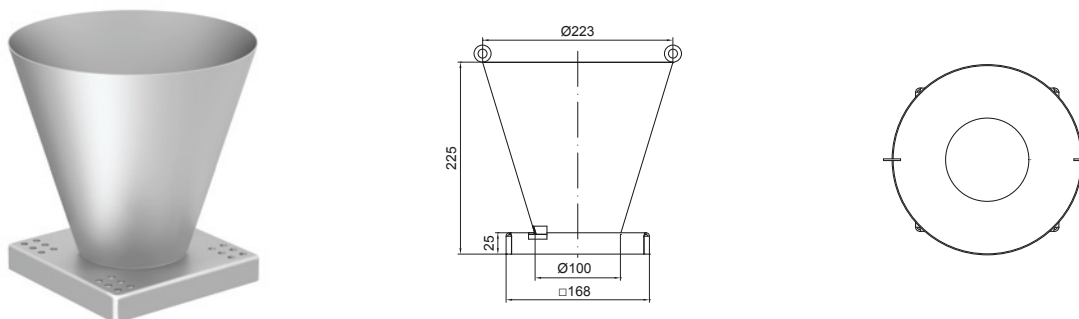


Load class	Slip resistant	Material	Item number
M 125	No	1.4301	408021 *
		1.4404	408121 *

ACO odour proof cover

For ACO odour proof cover, please contact our Sales/Technical department.

ACO tundish for gully top



Description	Material	Item number
ACO tundish for gully top 200 x 200	1.4301	415918

* Hygienic design following EN 1672, EN ISO 14159 and EHEDG document No. 8, 13 and 44 not applied.

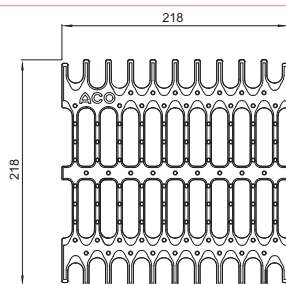
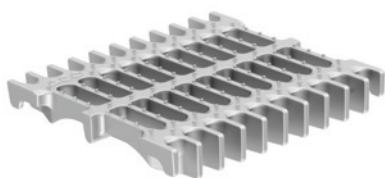
Gratings for gully top 250 x 250 mm

Product information

Variety of grate types is available depending on application and requested load class. For applications with high hygienic demands ladder grate or cast grate should be selected.

- Hygienic design following EN 1672, EN ISO 14159 and EHEDG document No. 8, 13 and 44
- Fits to stainless steel gully, fully compliant to EN 1253
- Available in 1.4301 (304) or 1.4404 (316L) grades of stainless steel
- Gully top frame size: 250 x 250 mm
- Gratings suitable to load class R50 (5 000 kg) - M125 (EN 1253) or N250 (EN 124) including antislip

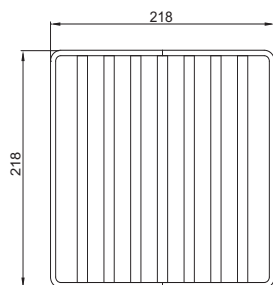
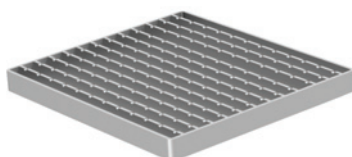
ACO hygienic cast grating



Load class	Slip resistant	Material	Item number
M 125	Yes	1.4301	416943

Note: Surface electropolished

ACO hygienic ladder grating

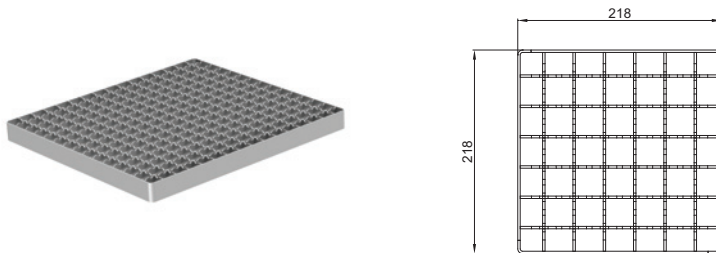


Load class	Slip resistant	Material	Item number
R 50	Yes	1.4301	416914
		1.4404	416915
M 125	Yes	1.4301	408028
		1.4404	408128
C 250	No	1.4301	408044 *
		1.4404	408144 *

Note: Surface electropolished

* Hygienic design following EN 1672, EN ISO 14159 and EHEDG document No. 8, 13 and 44 not applied.

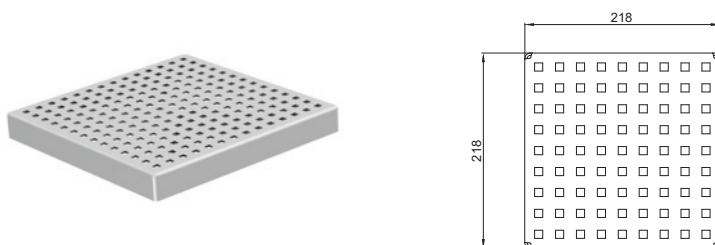
ACO mesh grating



Load class	Slip resistant	Material	Item number
L 15	Yes	1.4301	408095 *
		1.4404	408195 *
	No	1.4301	408096 *
		1.4404	408196 *

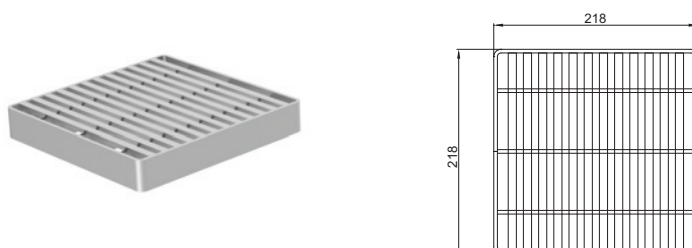
Note: Surface electropolished

ACO quadrato grating



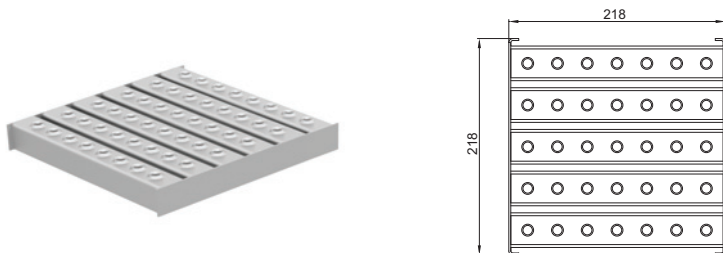
Load class	Slip resistant	Material	Item number
L 15	No	1.4301	408097 *
		1.4404	408197 *

ACO heelsafe grating



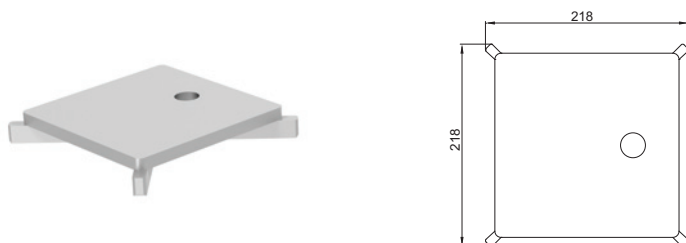
Load class	Slip resistant	Material	Item number
L 15	No	1.4301	408031 *
		1.4404	408131 *

* Hygienic design following EN 1672, EN ISO 14159 and EHEDG document No. 8, 13 and 44 not applied.

ACO multi-slot 5 grating


Load class	Slip resistant	Material	Item number
L 15	Yes	1.4301	408033 *
		1.4404	408133 *

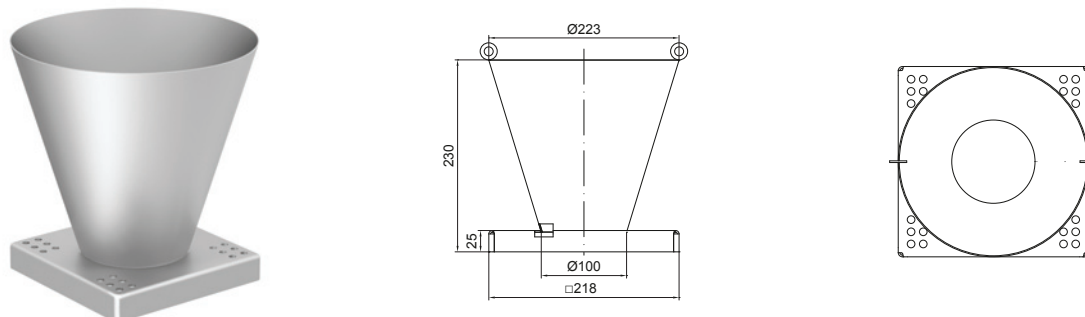
Note: Surface electropolished

ACO slot cover


Load class	Slip resistant	Material	Item number
M 125	No	1.4301	408030 *
		1.4404	408130 *

ACO odour proof cover

For ACO odour proof cover, please contact our Sales/Technical department.

ACO tundish for gully top


Description	Material	Item number
ACO tundish for gully top 250 x 250	1.4301	413546

* Hygienic design following EN 1672, EN ISO 14159 and EHEDG document No. 8, 13 and 44 not applied.

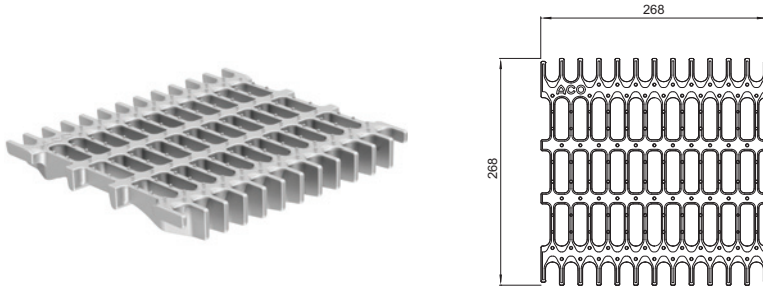
Gratings for gully top 300 x 300 mm

Product information

Variety of grate types is available depending on application and requested load class. For applications with high hygienic demands ladder grate or cast grate should be selected.

- Hygienic design following EN 1672, EN ISO 14159 and EHEDG document No. 8, 13 and 44
- Antislip solution available
- Fits to stainless steel gully, fully compliant to EN 1253
- Available in 1.4301 (304) or 1.4404 (316L) grades of stainless steel
- Gully top frame size: 300 x 300 mm
- Gratings suitable to load class L15, R50 (5 000 kg), M125 (EN 1253) or N250 (EN 124) including antislip

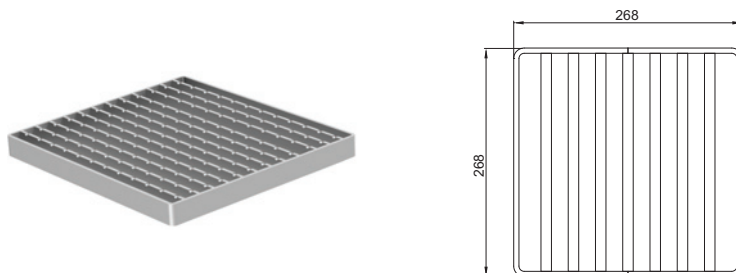
ACO hygienic cast grating



Load class	Slip resistant	Material	Item number
M 125	Yes	1.4301	416944

Note: Surface electropolished

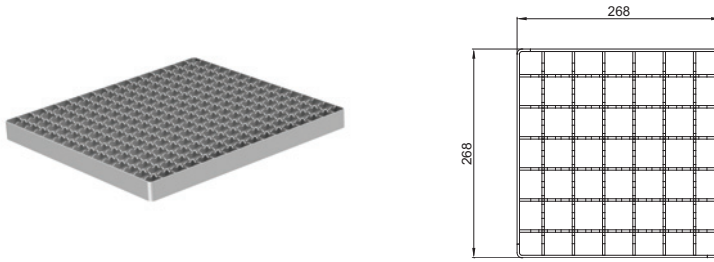
ACO hygienic ladder grating



Load class	Slip resistant	Material	Item number
R 50	Yes	1.4301	416916
		1.4404	416917
M 125	Yes	1.4301	408037
		1.4404	408137
C 250	No	1.4301	408045
		1.4404	408145

Note: Surface electropolished

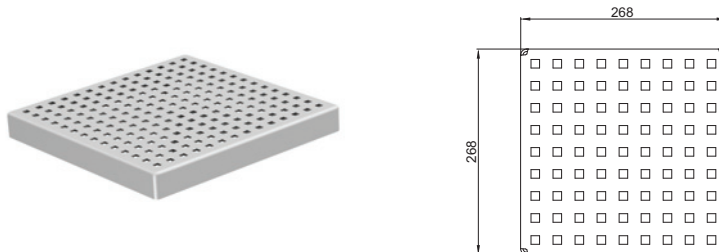
ACO mesh grating



Load class	Slip resistant	Material	Item number
L 15	Yes	1.4301	408034
		1.4404	408134
	No	1.4301	408035 *
		1.4404	408135 *

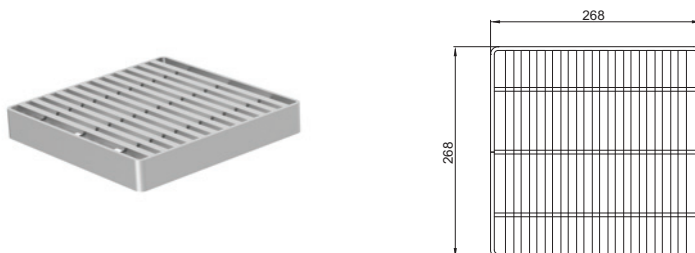
Note: Surface electropolished

ACO quadrato grating



Load class	Slip resistant	Material	Item number
L 15	No	1.4301	408036 *
		1.4404	408136 *

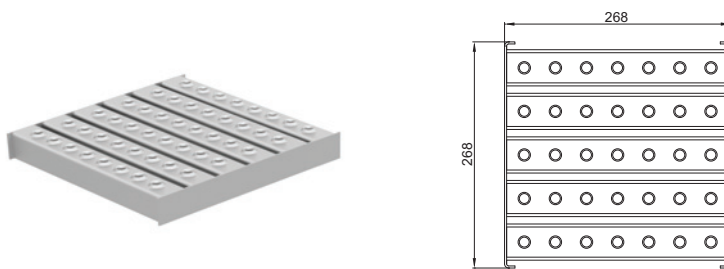
ACO heelsafe grating



Load class	Slip resistant	Material	Item number
L 15	No	1.4301	408040 *
		1.4404	408140 *

* Hygienic design following EN 1672, EN ISO 14159 and EHEDG document No. 8, 13 and 44 not applied.

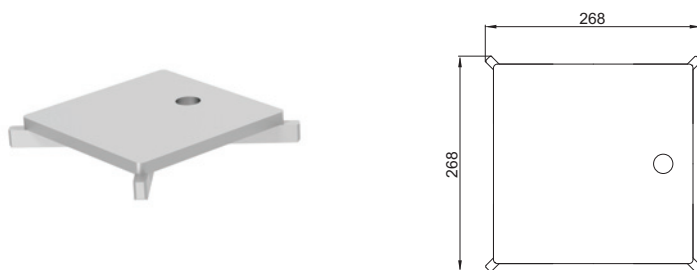
ACO multi-slot 5 grating



Load class	Slip resistant	Material	Item number
L 15	Yes	1.4301	408042 *
		1.4404	408142 *

Note: Surface electropolished

ACO slot cover

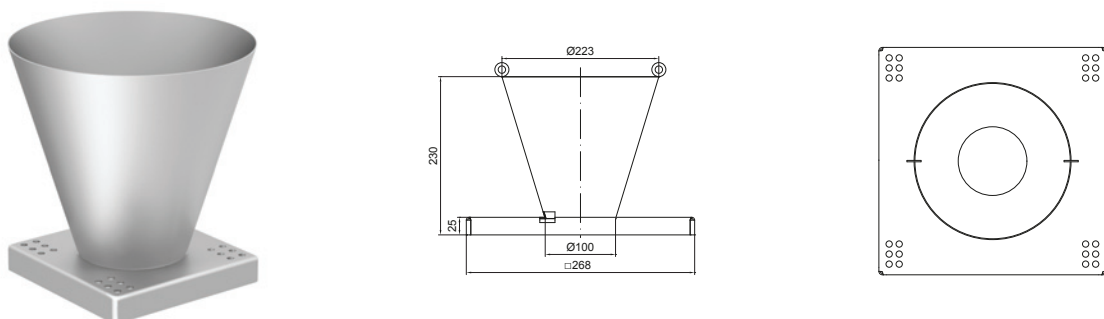


Load class	Slip resistant	Material	Item number
M 125	No	1.4301	408039 *
		1.4404	408139 *

ACO odour proof cover

For ACO odour proof cover, please contact our Sales/Technical department.

ACO tundish for gully top



Description	Material	Item number
ACO tundish for gully top 300 x 300	1.4301	413547

* Hygienic design following EN 1672, EN ISO 14159 and EHEDG document No. 8, 13 and 44 not applied.

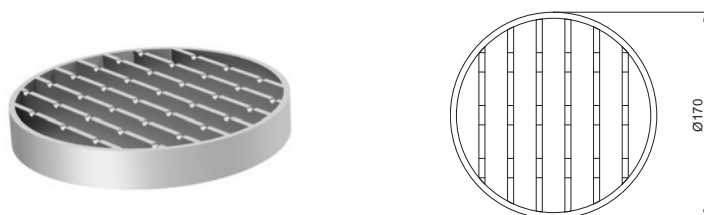
Gratings for vinyl top Ø170

Product information

Variety of grate types is available depending on application and requested load class. For applications with high hygienic demands ladder grate or cast grate should be selected.

- Hygienic design
- Stainless steel construction for durability and long life
- Fits to stainless steel gully, fully compliant to EN 1253
- Available in 1.4301 (304) or 1.4404 (316L) grades of stainless steel
- For load class L 15
- Tested and certified according to EN 1253

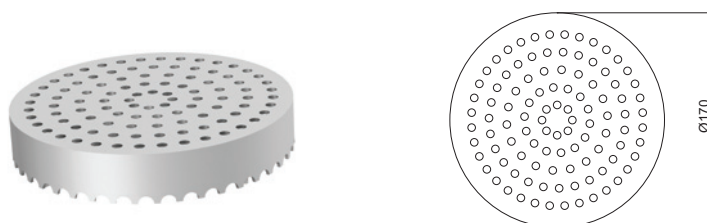
ACO ladder grating



Load class	Slip resistant	Material	Item number
L 15	Yes	1.4301	97146
		1.4404	97367

Note: Surface electropolished

ACO perforated grating



Load class	Slip resistant	Material	Item number
L 15	No	1.4301	97152 *
		1.4404	97369 *

* Hygienic design following EN 1672, EN ISO 14159 and EHEDG document No. 8, 13 and 44 not applied.

ACO odour proof cover

For ACO odour proof cover, please contact our Sales/Technical department.

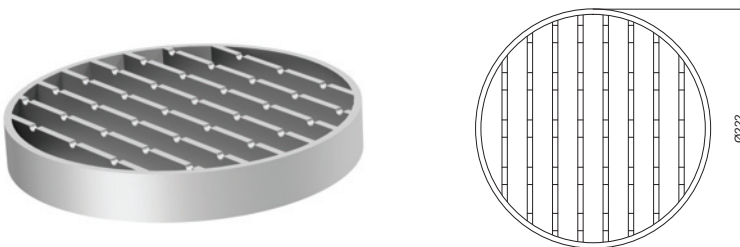
Gratings for vinyl top Ø222

Product information

Variety of grate types is available depending on application and requested load class. For applications with high hygienic demands ladder grate or cast grate should be selected.

- Hygienic design
- Stainless steel construction for durability and long life
- Fits to stainless steel gully, fully compliant to EN 1253
- Available in 1.4301 (304) or 1.4404 (316L) grades of stainless steel
- For load class L 15
- Tested and certified according to EN 1253

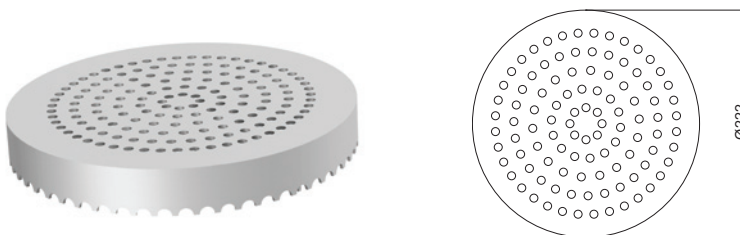
ACO ladder grating



Load class	Slip resistant	Material	Item number
L 15	Yes	1.4301	97148
		1.4404	97388

Note: Surface electropolished

ACO perforated grating



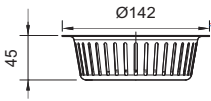
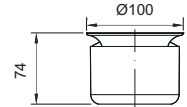
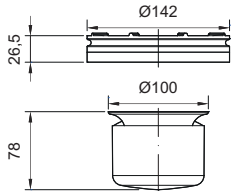
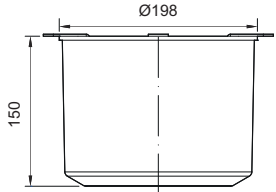
Load class	Slip resistant	Material	Item number
L 15	No	1.4301	97153 *
		1.4404	97390 *

* Hygienic design following EN 1672, EN ISO 14159 and EHEDG document No. 8, 13 and 44 not applied.

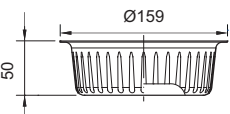
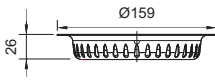
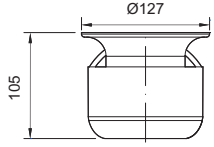
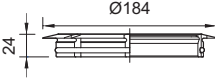
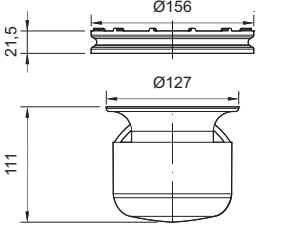
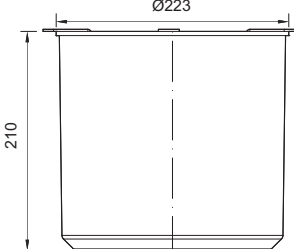
ACO odour proof cover

For ACO odour proof cover, please contact our Sales/Technical department.

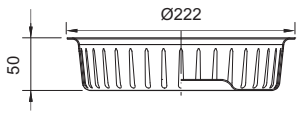
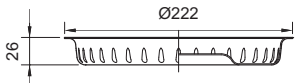
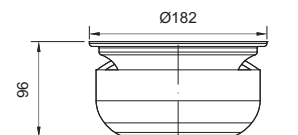
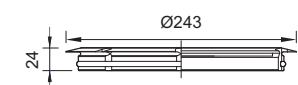
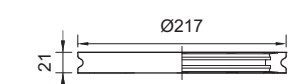
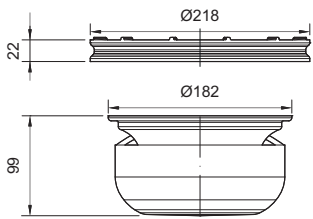
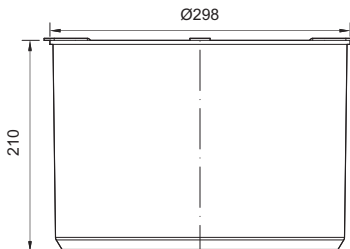
Accessories for ACO hygienic gully 142

	Description	Used with	Material	Item number
	Silt basket ■ Stainless steel ■ 0,4 litre capacity	■ ACO hygienic gully 142 - Telescopic ☐ Vertical or horizontal	1.4301	416900
			1.4404	416901
	Silt basket ■ Stainless steel ■ 0,3 litre capacity	■ ACO hygienic gully 142 - Fixed height ☐ Vertical or horizontal	1.4301	416902
			1.4404	416903
	Hygienic foul air trap ■ Stainless steel ■ Water seal 50 mm	■ ACO hygienic gully 142 ☐ Fixed height ☐ Telescopic	1.4301	414741
			1.4404	414841
	Friction ring ■ NBR (Acryl nitrile-butadiene)	■ ACO hygienic gully 142 ☐ Telescopic	NBR	414742
	Standard foul air trap support ■ NBR (Acryl nitrile-butadiene)	■ ACO hygienic gully 142 ☐ Fixed height ☐ Telescopic	NBR	414743
	ACO fire resistant kit for gully 142/D75 ☐ Fixed Height, vertical ☐ Telescopic, vertical	■ ACO hygienic gully 142 ☐ Fixed Height, vertical ☐ Telescopic, vertical		416930
		ACO fire resistant kit for gully 142/DN 100 ☐ Fixed Height, vertical ☐ Telescopic, vertical		416931

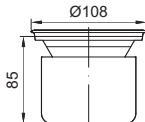
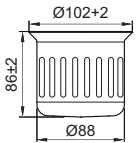
Accessories for ACO hygienic gully 157

	Description	Used with	Material	Item number
	Silt basket ■ Stainless steel ■ 0,6 litre capacity	■ ACO hygienic gully 157 - Vertical ☐ Fixed height or Telescopic	1.4301	416904
			1.4404	416905
	Silt basket ■ Stainless steel ■ 0,3 litre capacity	■ ACO hygienic gully 157 - Horizontal ☐ Fixed height or Telescopic	1.4301	416906
			1.4404	416907
	Hygienic foul air trap ■ Stainless steel ■ Water seal 50 mm	■ ACO hygienic gully 157 ☐ Telescopic	1.4301	408200
			1.4404	408210
	Friction ring ■ NBR (Acryl nitrile-butadiene)	■ ACO hygienic gully 157 ☐ Fixed height ☐ Telescopic	NBR	408205
	Standard foul air trap support ■ NBR (Acryl nitrile-butadiene)	■ ACO hygienic gully 157 ☐ Fixed height ☐ Telescopic	NBR	408201
	ACO fire resistant kit for gully 157/D75 ☐ Fixed Height, vertical ☐ Telescopic, vertical	■ ACO hygienic gully 157 ☐ Fixed Height, vertical ☐ Telescopic, vertical		416932
		ACO fire resistant kit for gully 157/DN 100 ☐ Fixed Height, vertical ☐ Telescopic, vertical		416933

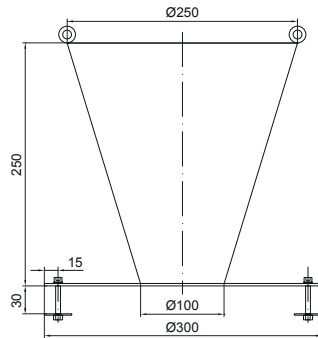
Accessories for ACO hygienic gully 218

	Description	Used with	Material	Item number
	Silt basket ■ Stainless steel ■ 1,4 litre capacity	■ ACO hygienic gully 218 - Vertical □ Fixed height or Telescopic	1.4301	416908
			1.4404	416909
	Silt basket ■ Stainless steel ■ 0,7 litre capacity	■ ACO hygienic gully 218 - Horizontal □ Fixed height or Telescopic	1.4301	416910
			1.4404	416911
	Hygienic foul air trap ■ Stainless steel ■ Water seal 50 mm	■ ACO hygienic gully 218 □ Fixed height □ Telescopic	1.4301	408220
			1.4404	408230
	Friction ring ■ NBR (Acryl nitrile-butadiene)	■ ACO hygienic gully 218 □ Telescopic	NBR	408225
	Standard foul air trap support ■ NBR (Acryl nitrile-butadiene)	■ ACO hygienic gully 218 □ Fixed height □ Telescopic	NBR	408221
	ACO fire resistant kit for gully 218/DN110 □ Fixed Height, vertical □ Telescopic, vertical	■ ACO hygienic gully 218 □ Fixed Height, vertical □ Telescopic, vertical		416934
	ACO fire resistant kit for gully 218/DN160 □ Fixed Height, vertical □ Telescopic, vertical	■ ACO hygienic gully 218 □ Fixed Height, vertical □ Telescopic, vertical		416935

Accessories for ACO gully EG150

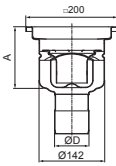
	Description	Used with	Material	Item number
	Sieve (for outlet 110 mm) ■ Stainless steel	■ ACO slot channel 20 ■ ACO modular box channel 125 ■ ACO modular box channel 200 ■ ACO modular slot channel 20	1.4301	97235
			1.4404	97285
	Foul air trap ■ Stainless steel ■ Water seal 50 mm	■ ACO slot channel 20 ■ ACO modular box channel 125 ■ ACO modular box channel 200 ■ ACO modular slot channel 20	1.4301	97217
			1.4404	97267
	Silt basket ■ Stainless steel	■ ACO slot channel 20 ■ ACO modular box channel 125 ■ ACO modular box channel 200 ■ ACO modular slot channel 20 ■ Don't combine with FAT ■ Suitable with P-Trap (ACO pipe chapter)	1.4301	409189
			1.4404	409190

ACO tundish portable

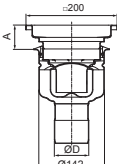
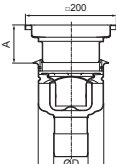
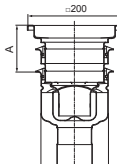
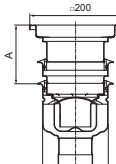
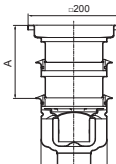
		Description	Material	Item number
		ACO tundish portable ■ Stainless steel	1.4301	415821

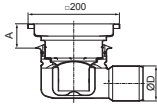
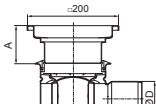
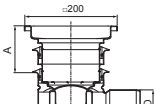
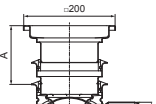
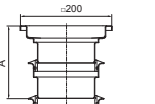
Flow rates and Construction heights

ACO hygienic gully 142 – fixed height

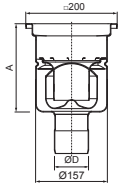
					
Outlet diameter	Outlet position	Flow rate [l/s]	Outlet diameter	Outlet position	Flow rate [l/s]
ØD	Vertical	A = 135 [mm]	ØD	Horizontal	A = 135 [mm]
75		1.4	75		1.4
110		1.6	110		1.6

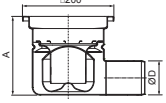
ACO hygienic gully 142 – telescopic

						
Outlet diameter	Outlet position	Flow rate [l/s]				
ØD	Vertical	A = 52 [mm]	A = 82 [mm]	A = 97 [mm]	A = 127 [mm]	A = 157 [mm]
75		1.4	1.6	1.6	1.7	1.8
110		1.6	1.8	1.8	1.9	2.0

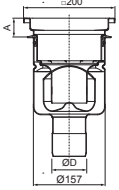
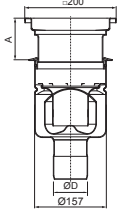
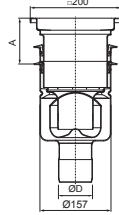
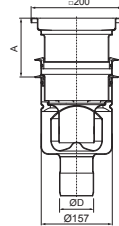
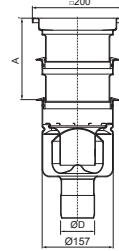
						
Outlet diameter	Outlet position	Flow rate [l/s]				
ØD	Horizontal	A = 52 [mm]	A = 82 [mm]	A = 97 [mm]	A = 127 [mm]	A = 157 [mm]
75		1.4	1.6	1.6	1.7	1.8
110		1.6	1.8	1.8	1.9	2.0

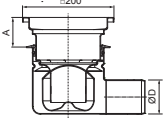
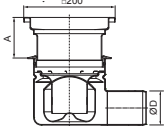
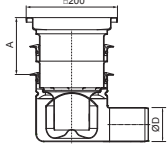
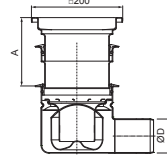
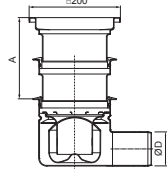
ACO hygienic gully 157 – fixed height

		
Outlet diameter	Outlet position	Flow rate [l/s]
ØD		A = 193 [mm]
75	Vertical	2.7
110		3.5

		
Outlet diameter	Outlet position	Flow rate [l/s]
ØD		A = 170 [mm]
75	Horizontal	2.6
110		2.8

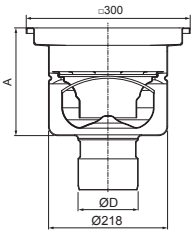
ACO hygienic gully 157 – telescopic

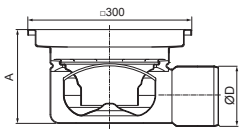
						
Outlet diameter	Outlet position	Flow rate [l/s]				
ØD		A = 65 [mm]	A = 91 [mm]	A = 125 [mm]	A = 153 [mm]	A = 180 [mm]
75	Vertical	2.7	3.0	3.0	3.1	3.3
110		3.5	4.0	4.1	4.2	4.4

						
Outlet diameter	Outlet position	Flow rate [l/s]				
ØD		A = 52 [mm]	A = 82 [mm]	A = 97 [mm]	A = 127 [mm]	A = 157 [mm]
75	Horizontal	2.6	2.9	3.0	3.1	3.3
110		2.8	3.3	3.6	4.0	4.4

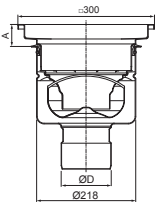
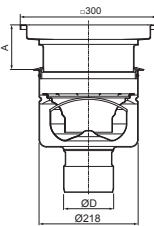
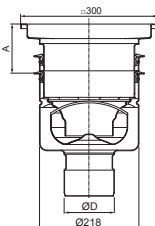
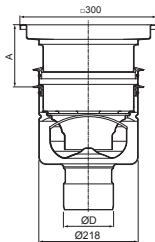
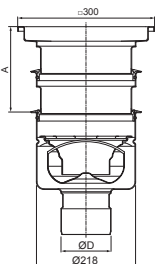
Flow rates and Construction heights

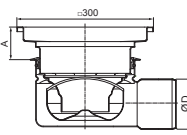
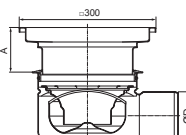
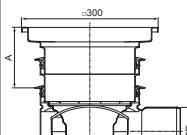
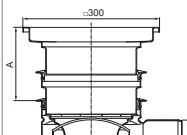
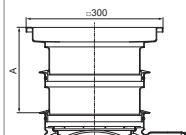
ACO hygienic gully 218 – fixed height

		
Outlet diameter	Outlet position	Flow rate [l/s]
ØD	Vertical	A = 200 [mm]
110		5.0
160		5.0

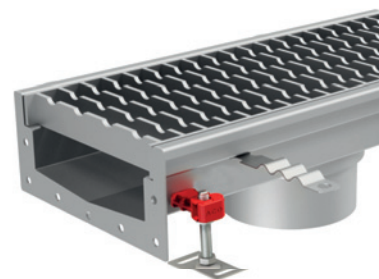
		
Outlet diameter	Outlet position	Flow rate [l/s]
ØD	Horizontal	A = 177 [mm]
110		4.4

ACO hygienic gully 218 – telescopic

						
Outlet diameter	Outlet position	Flow rate [l/s]				
ØD	Vertical	A = 65 [mm]	A = 91 [mm]	A = 125 [mm]	A = 153 [mm]	A = 180 [mm]
110		5.0	5.5	5.6	5.8	6.2
160		5.0	5.5	5.6	5.8	6.2

						
Outlet diameter	Outlet position	Flow rate [l/s]				
ØD	Horizontal	A = 72 [mm]	A = 98 [mm]	A = 132 [mm]	A = 156 [mm]	A = 187 [mm]
110		4.4	4.6	4.8	4.9	5.4





ACO channel

		Page
ACO channel	Introduction	Hygienic design 82
		System overview 83
	ACO box channel	Introduction 84
		ACO hygienic box channel - standard articles 86
		ACO hygienic box channel - semi-standard 89
		ACO vinyl box channel - standard articles 90
		ACO vinyl box channel - semi-standard 92
		ACO hygienic cast grating 93
		ACO hygienic ladder grating 94
		ACO mesh grating 97
		Accessories for ACO hygienic box channel 99
		ACO customized box channel 100
	ACO slot channel	Introduction 104
		ACO slot channel - semi-standard 106
		ACO customized slot channel 107
	ACO modular channel	Introduction 112
		ACO modular box channel 125 - standard articles 116
		Gratings for ACO modular box channel 125 122
		Accessories for ACO modular box channel 125 126
		ACO modular box channel 200 - standard articles 127
		Gratings for ACO modular box channel 200 135
		Accessories for ACO modular box channel 200 138
		ACO modular slot channel 20 - standard articles 139
		Accessories for ACO modular slot channel 20 144
		ACO modular channel - semi-standard 145
	ACO design channel	ACO design channel 146
	Flow rates	Flow rates and Construction heights 147

Hygienic design

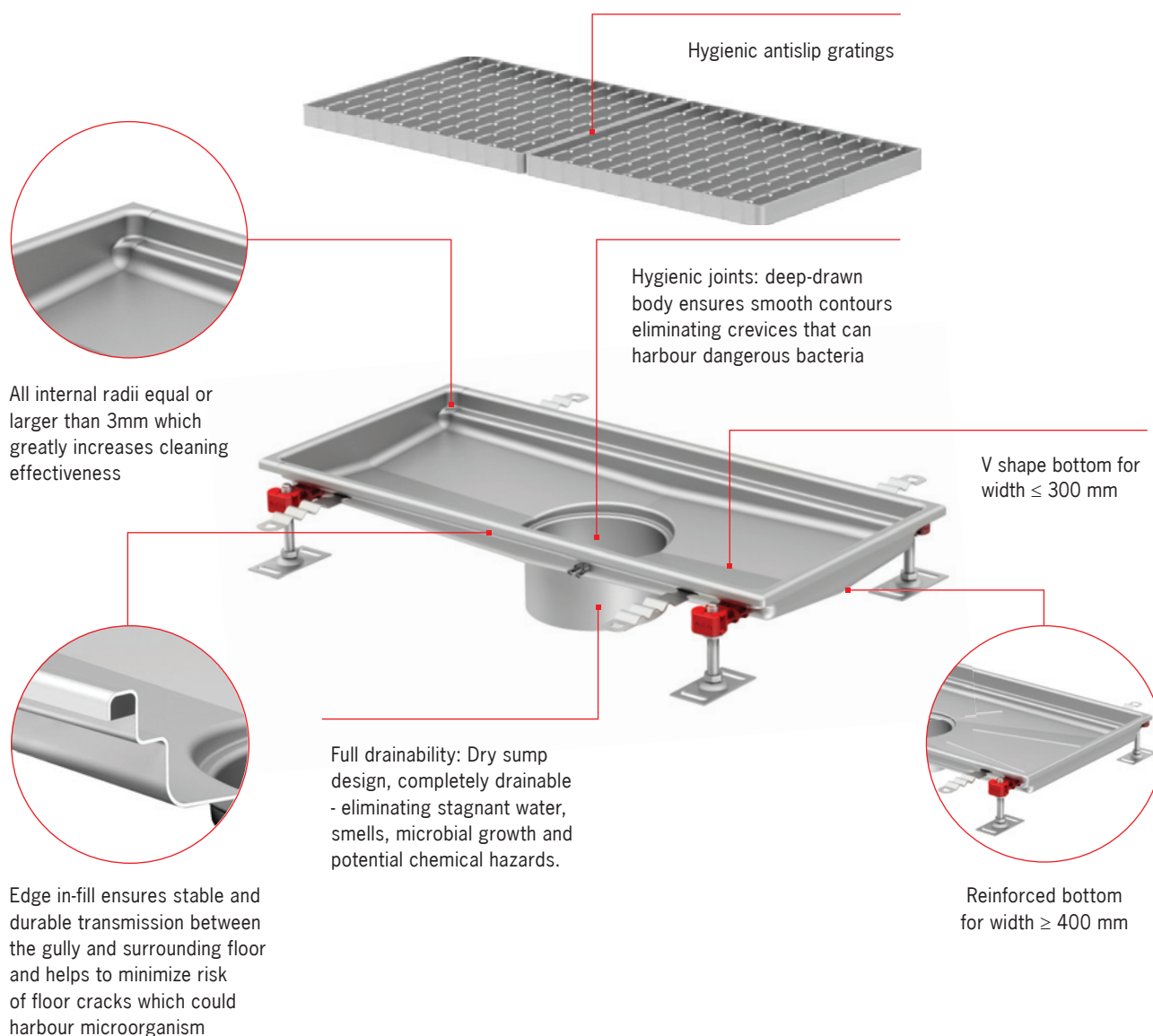
ACO offers sustainable, integrated drainage systems which are designed to protect your business, the environment and ultimately public health. Our aim is to constantly improve every aspect of safety, hygiene and functional performance.

We believe that our systems and services are truly unique, delivering unparalleled benefits to everyone involved in project delivery or subsequent operation.

ACO hygienic drainage fulfills stringent hygienic requirements to prevent harmful bacterial contamination. We apply the relevant hygienic design principles reserved for food contact surfaces EN 1672, EN ISO 14159 and EHEDG document to the channel design.

ACO channel hygienic features:

- Fully drainable
- Internal radii equal or larger than 3 mm
- Hygienic joints
- Edge infill
- Stainless steel grade min. AISI 304
- Fully pickled and passivated



System overview

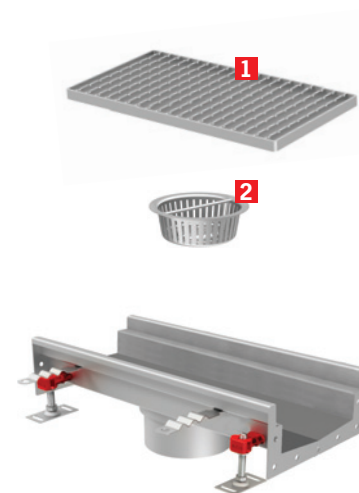
ACO channel



ACO box channel



ACO slot channel



ACO modular box channel

- 1** Gratings
- 2** Silt basket
- 3** Friction ring
- 4** Foul air trap
- 5** Foul air trap support
- 6** ACO gully



**ACO gully
with accessories**

Introduction

ACO box channel portfolio

The ACO box channel range includes channels for all common applications and all common floor types (concrete, tiles, resin or vinyl). The ACO box channel portfolio is designed with respect to hygienic design requirements. Selecting a channel from the range is easy.

The unique variability of the whole portfolio makes it easy to choose a channel that suits a customer's specific needs. Channel length, depth and outlet position are just a few of the parameters which can be varied and, regardless of the variations specified, there is no impact on delivery lead times.

ACO box channel ordering

The dimensions of the ACO box channel can be easily specified in respect of project requirements. To specify the channel please use the Specification template (see page 103) which will help you to identify the information you need, or contact our Sales/Technical department.

ACO box channels with fixed dimensions are also available. These dimensions are a selection of most frequently sold ACO box channels. Please see page 85 where you can find the overview.

ACO box channel customization

In addition all ACO box channels can be designed with:

- Special outlet position
- Special depth
- Special slope
- Special channel width
- L-shape and T-shape lay out
- Special side inlets

To ask for customised ACO box channel, please contact our Sales/technical department. Please take into consideration that ACO channel customization could decrease the number of hygienic design features.

ACO box channel system overview

ACO box channel - fixed height solution



ACO hygienic box channel
Standard edge

ACO hygienic box channel
Extended edge

ACO vinyl box channel

ACO box channel - telescopic solution



ACO hygienic box channel
Standard edge

ACO hygienic box channel
Extended edge

ACO vinyl box channel

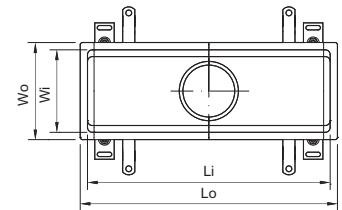
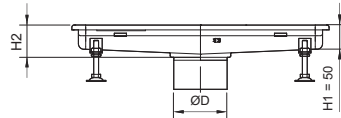
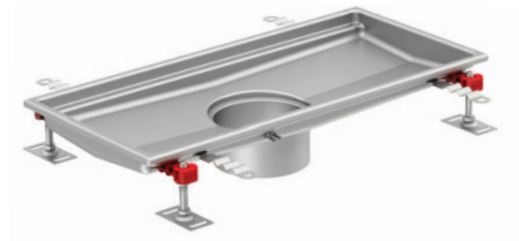
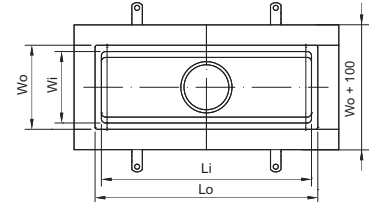
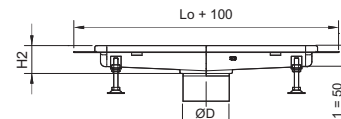


ACO hygienic gully
with accessories

ACO hygienic box channel - standard articles
Product information

The dimensions of the ACO hygienic box channel for concrete, tiles and resin floor can be easily specified in respect of project requirements or easily chosen from predefined fixed dimensions.

- Hygienic design following EN 1672, EN ISO 14159 and EHEDG document No. 8, 13 and 44
- Tested and certified according to EN 1253
- Available in 1.4301 (304) or 1.4404 (316L) grades of stainless steel
- Fully pickled and passivated
- Material thickness 1,5mm
- Minimal longitudinal slope 1 %
- Min. sectional slope 5°
- V-shape bottom for width < 300 mm
- Reinforced bottom for width > 400 mm
- Rubber edge infill
- Outlet without deformation
- Rounded corners equal or larger than 3 mm
- Easy and secure telescopic connection with gully
- Hygienic gratings with slip resistance
- Adjustable leveling feet 60-110 mm
- Anchors for fixing in concrete

Order information
Standard edge

Extended edge


Wo [mm]	Wi [mm]	Channel dimensions		H2 [mm]	ØD [mm]	Gully	Material	Standard edge	Extended edge
		Lo [mm]	Li [mm]					Item number	Item number
200	170	530	500	60	125	ACO hygienic gully 142	1.4301	416584	416680
		530	500				1.4404	416602	416698
		830	800				1.4301	416585	416681
		830	800				1.4404	416603	416699
		1030	1000				1.4301	416586	416682
		1030	1000				1.4404	416604	416700
		1230	1200				1.4301	416587	416683
		1230	1200				1.4404	416605	416701
		1530	1500				1.4301	416588	416684
		1530	1500				1.4404	416606	416702
		2030	2000				1.4301	416589	416685
		2030	2000				1.4404	416607	416703

Order information

Channel dimensions						Gully	Material	Standard edge	Extended edge				
Wo [mm]	Wi [mm]	Lo [mm]	Li [mm]	H2 [mm]	ØD [mm]			Item number	Item number				
200	170	530	500	60	142	ACO hygienic gully 157	1.4301	416590	416686				
		530	500				1.4404	416608	416704				
		830	800				1.4301	416591	416687				
		830	800				1.4404	416609	416705				
		1030	1000				1.4301	416592	416688				
		1030	1000				1.4404	416610	416706				
		1230	1200				1.4301	416593	416689				
		1230	1200				1.4404	416611	416707				
		1530	1500				1.4301	416594	416690				
		1530	1500				1.4404	416612	416708				
		2030	2000				1.4301	416595	416691				
		2030	2000				1.4404	416613	416709				
300	270	330	300	55	142	ACO hygienic gully 157	1.4301	416614	416710				
		330	300	60			1.4404	416628	416724				
		630	600				1.4301	416615	416711				
		630	600	60			1.4404	416629	416725				
		1030	1000				1.4301	416616	416712				
		1030	1000	60			1.4404	416630	416726				
		1530	1500				1.4301	416617	416713				
		1530	1500	60			1.4404	416631	416727				
		2030	2000				1.4301	416618	416714				
		2030	2000	60			1.4404	416632	416728				
		3030	3000				1.4301	416619	416715				
		3030	3000	70			1.4404	416633	416729				
		4030	4000				1.4301	416620	416716				
		4030	4000	80			1.4404	416634	416730				
		300	270				330	300	55	200	ACO hygienic gully 218	1.4301	416621
				330			300	1.4404				416635	416731
630	600			60	1.4301	416622	416718						
630	600				1.4404	416636	416732						
1030	1000			60	1.4301	416623	416719						
1030	1000				1.4404	416637	416733						
1530	1500			60	1.4301	416624	416720						
1530	1500				1.4404	416638	416734						
2030	2000			60	1.4301	416625	416721						
2030	2000				1.4404	416639	416735						
3030	3000			70	1.4301	416626	416722						
3030	3000				1.4404	416640	416736						
4030	4000			80	1.4301	416627	416723						
4030	4000				1.4404	416641	416737						
400	370	430	400	60	142	ACO hygienic gully 157	1.4301	416642	416738				
		430	400				1.4404	416648	416744				
		630	600				1.4301	416643	416739				
		630	600				1.4404	416649	416745				
		830	800				1.4301	416644	416740				
		830	800				1.4404	416650	416746				
400	370	430	400	60	200	ACO hygienic gully 218	1.4301	416645	416741				
		430	400				1.4404	416651	416747				
		630	600				1.4301	416646	416742				
		630	600				1.4404	416652	416748				
		830	800				1.4301	416647	416743				
		830	800				1.4404	416653	416749				

Wo [mm]	Wi [mm]	Channel dimensions		H2 [mm]	ØD [mm]	Gully	Material	Standard edge	Extended edge
		Lo [mm]	Li [mm]					Item number	Item number
500	470	530	500	65	142	ACO hygienic gully 157	1.4301	416654	416750
		530	500				1.4404	416660	416756
		830	800				1.4301	416655	416751
		830	800				1.4404	416661	416757
		1030	1000				1.4301	416656	416752
		1030	1000				1.4404	416662	416758
500	470	530	500	65	200	ACO hygienic gully 157	1.4301	416657	416753
		530	500				1.4404	416663	416759
		830	800				1.4301	416658	416754
		830	800				1.4404	416664	416760
		1030	1000				1.4301	416659	416755
		1030	1000				1.4404	416665	416761
600	570	630	600	70	200	ACO hygienic gully 218	1.4301	416666	416762
		630	600				1.4404	416669	416765
		930	900				1.4301	416667	416763
		930	900				1.4404	416670	416766
		1230	1200				1.4301	416668	416764
		1230	1200				1.4404	416671	416767
800	770	830	800	80	200	ACO hygienic gully 218	1.4301	416672	416768
							1.4301	416673	416769

ACO hygienic box channel - semi-standard

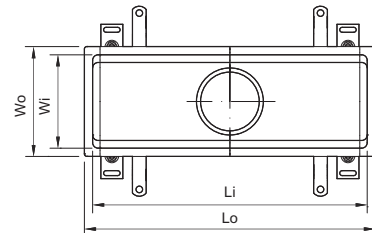
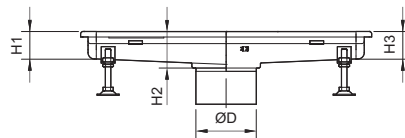
Product information

The dimensions of the ACO hygienic box channel for concrete, tiles and resin floor can be easily specified in respect of project requirements.

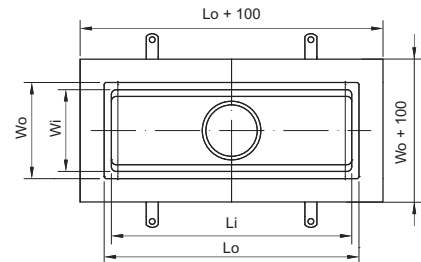
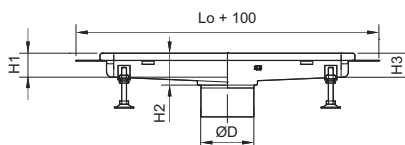
- Hygienic design following EN 1672, EN ISO 14159 and EHEDG document No. 8, 13 and 44
- Tested and certified according to EN 1253
- Available in 1.4301 (304) or 1.4404 (316L) grades of stainless steel
- Fully pickled and passivated
- Material thickness 1,5mm
- V-shape bottom for width < 300 mm
- Reinforced bottom for width > 400 mm
- Length - up to customer request
- Height - variable 50-200
- Outlet position variable in longitudinal axis
- Sectional slope of the channel bottom 5°
- Longitudinal slope of the channel bottom 1-5 %
- Standardized widths
- Rounded corners minimal 3 mm
- Easy and secure telescopic connection with gully
- Hygienic gratings with slip resistance
- Adjustable leveling feet 60-110 mm
- Anchors for fixing in concrete

Order information

Standard edge



Extended edge



External (overall) width Wo [mm]	Internal (grating) width Wi [mm]	Length of channel Lo	Height at outlet of channel H2	Height at end of channel H1 and H3
200	170	Variable *	50-200	50, 80, 110, 140
300	270			
400	370			
500	470			
600	570			
800	770			

* Long channels over 6m are standard divided in 6m sections with transport joints.

In case of requirements one piece channel, channels have to be welded on site. Please contact our Sales/Technical department.

ACO vinyl box channel - standard articles

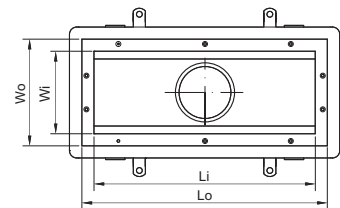
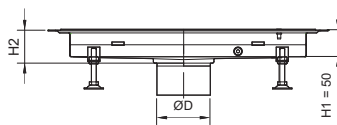
Product information

The dimensions of the ACO vinyl box channel can be specified in respect of project requirements or easily chosen from predefined fixed dimensions.

- Fully compliant to EN 1253
- Available in 1.4301 (304) or 1.4404 (316L) grades of stainless steel, pickled and passivated
- Material thickness 1,5 mm
- Easy and secure telescopic connection with gully
- Adjustable leveling feet 60-110 mm
- Anchors for fixing in concrete

Order information

Vinyl edge



Channel dimensions				H2 [mm]	ØD [mm]	Gully	Material	Vinyl edge
Wo [mm]	Wi [mm]	Lo [mm]	Li [mm]					Item number
220	170	550	500	60	125	ACO hygienic gully 142	1.4301	413358
		550	500				1.4404	413376
		850	800				1.4301	413359
		850	800				1.4404	413377
		1050	1000				1.4301	413360
		1050	1000				1.4404	413378
		1250	1200				1.4301	413361
		1250	1200				1.4404	413379
		1550	1500				1.4301	413362
		1550	1500				1.4404	413380
		2050	2000				1.4301	413363
		2050	2000				1.4404	413381
220	170	550	500	60	142	ACO hygienic gully 157	1.4301	413364
		550	500				1.4404	413382
		850	800				1.4301	413365
		850	800				1.4404	413383
		1050	1000				1.4301	413366
		1050	1000				1.4404	413384
		1250	1200				1.4301	413367
		1250	1200				1.4404	413385
		1550	1500				1.4301	413368
		1550	1500				1.4404	413386
		2050	2000				1.4301	413369
		2050	2000				1.4404	413387

ACO box channel
ACO vinyl box channel - standard articles

Channel dimensions						Gully	Material	Vinyl edge
Wo [mm]	Wi [mm]	Lo [mm]	Li [mm]	H2 [mm]	ØD [mm]			Item number
320	270	350	300	60	142	ACO hygienic gully 157	1.4301	413388
		350	300				1.4404	413402
		650	600				1.4301	413389
		650	600				1.4404	413403
		1050	1000				1.4301	413390
		1050	1000				1.4404	413404
		1550	1500				1.4301	413391
		1550	1500				1.4404	413405
		2050	2000				1.4301	413392
		2050	2000				1.4404	413406
		3050	3000	1.4301			413393	
		3050	3000	1.4404			413407	
		4050	4000	1.4301			413394	
		4050	4000	1.4404			413408	
320	270	350	300	60	200	ACO hygienic gully 218	1.4301	413395
		350	300				1.4404	413409
		650	600				1.4301	413396
		650	600				1.4404	413410
		1050	1000				1.4301	413397
		1050	1000				1.4404	413411
		1550	1500				1.4301	413398
		1550	1500				1.4404	413412
		2050	2000				1.4301	413399
		2050	2000				1.4404	413413
		3050	3000	1.4301			413400	
		3050	3000	1.4404			413414	
		4050	4000	1.4301			413401	
		4050	4000	1.4404			413415	
420	370	450	400	60	142	ACO hygienic gully 157	1.4301	413416
		450	400				1.4404	413422
		650	600				1.4301	413417
		650	600				1.4404	413423
		850	800				1.4301	413418
		850	800				1.4404	413424
420	370	450	400	60	200	ACO hygienic gully 218	1.4301	413419
		450	400				1.4404	413425
		650	600				1.4301	413420
		650	600				1.4404	413426
		850	800				1.4301	413421
		850	800				1.4404	413427
520	470	530	500	65	142	ACO hygienic gully 157	1.4301	413428
		530	500				1.4404	413434
		830	800				1.4301	413429
		830	800				1.4404	413435
		1030	1000				1.4301	413430
		1030	1000				1.4404	413436
520	470	550	500	65	200	ACO hygienic gully 218	1.4301	413431
		550	500				1.4404	413437
		850	800				1.4301	413432
		850	800				1.4404	413438
		1050	1000				1.4301	413433
		1050	1000				1.4404	413439
620	570	650	600	70	200	ACO hygienic gully 218	1.4301	413440
		650	600				1.4404	413443
		950	900				1.4301	413441
		950	900				1.4404	413444
		1250	1200				1.4301	413442
		1250	1200				1.4404	413445
820	770	850	800	80	200	ACO hygienic gully 218	1.4301	413446
							1.4301	413447

ACO vinyl box channel - semi-standard

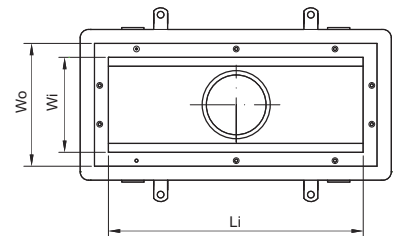
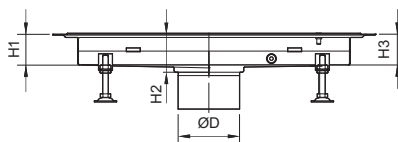
Product information

The dimensions of the ACO vinyl box channel can be easily specified in respect of project requirements.

- Fully compliant to EN 1253
- Available in 1.4301 (304) or 1.4404 (316L) grades of stainless steel, pickled and passivated
- Material thickness 1,5 mm
- Height variable 50-200 mm
- Length – up to customer request
- Standardized widths
- Outlet position central or variable in longitudinal axis
- Longitudinal slopes of the channel bottom 1-5 %
- Adjustable leveling feet 60-110 mm
- Anchors for fixing in concrete

Order information

Vinyl edge



External (overall) width Wo [mm]	Internal (grating) width Wi [mm]	Length of channel Li	Height at outlet of channel H2	Height at end of channel H1 and H3
230	170	Variable *	50-200	50, 80, 110, 140
330	270			
430	370			
530	470			
630	570			
830	870			

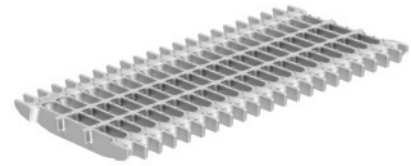
* Long channels over 6m are standard divided in 6m sections with transport joins.

In case of requirements one piece channel, channels have to be welded on site. Please contact our Sales/Technical department.

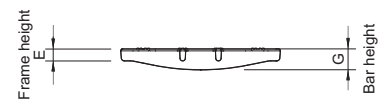
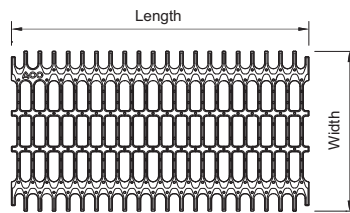
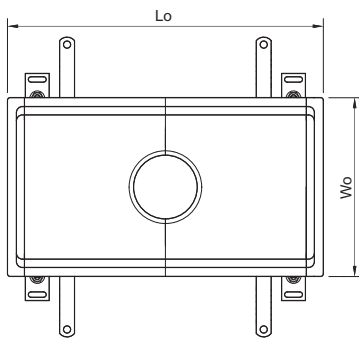
ACO hygienic cast grating

Product information

- ACO hygienic cast grating with slip resistant finish
- Frameless design for optimum drainability and cleanability
- Tested and certified according to EN 1253
- Hygienic design following EN 1672, EN ISO 14159 and EHEDG document No. 8, 13 and 44
- Surface electropolished
- Easy to clean grates
- Designed for Load class - M 125
- Slip resistant
 - Low potential for slip according to BS 7976-2,
 - R13 according to DIN 51130



Order information - Load class M 125

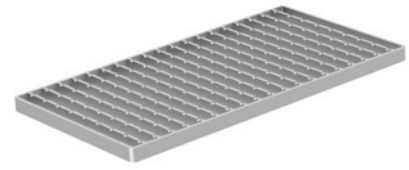


Channel dimension		Grating dimension				Material	Item number	Quantity to fill channel
Wo [mm]	Lo [mm]	Frame height E [mm]	Bar height G [mm]	Width [mm]	Length [mm]			
200	530	20	30	168	499	1.4301	416947	1
	830	20	30	168	398	1.4301	416948	2
	1030	20	30	168	499	1.4301	416947	2
	1230	20	30	168	398	1.4301	416948	3
	1530	20	30	168	499	1.4301	416947	3
	2030	20	30	168	499	1.4301	416947	4
300	330	20	30	268	298	1.4301	416946	1
	630	20	30	268	298	1.4301	416946	2
	1030	20	30	268	499	1.4301	416945	2
	1530	20	30	268	499	1.4301	416945	3
	2030	20	30	268	499	1.4301	416945	4
	3030	20	30	268	499	1.4301	416945	6
	4030	20	30	268	499	1.4301	416945	8

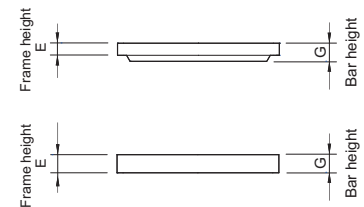
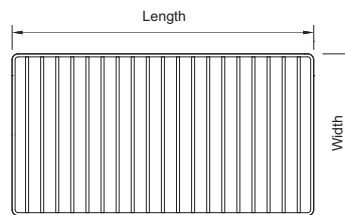
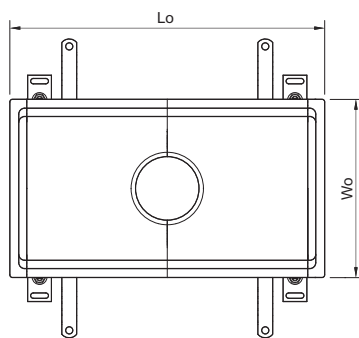
ACO hygienic ladder grating

Product information

- ACO hygienic ladder grating with slip resistant finish
- Hygienic design following EN 1672, EN ISO 14159 and EHEDG document No. 8, 13 and 44
- Designed for Load class - R 50 (version for 5 000 kg) and M 125 according EN 1253
- Surface - electropolished
- High flow capacity of grates
- Rounded corners
- Easy to clean grates = fully welded
- Slip resistant
 - Low potential for slip according to BS 7976-2,
 - R11 according to DIN 51130



Order information - Load class R 50



Channel dimension		Grating dimension				Material	Item number	Quantity to fill channel
Wo	Lo	Frame height	Bar height	Width	Length			
[mm]	[mm]	E [mm]	G [mm]	[mm]	[mm]			
200	530	20	20	168	499	1.4301	416802	1
						1.4404	416803	
	830	20	20	168	398	1.4301	416808	2
						1.4404	416809	
	1030	20	20	168	499	1.4301	416802	2
						1.4404	416803	
	1230	20	20	168	398	1.4301	416808	3
						1.4404	416809	
	1530	20	20	168	499	1.4301	416802	3
						1.4404	416803	
	2030	20	20	168	499	1.4301	416802	4
						1.4404	416803	

Channel dimension		Grating dimension				Material	Item number	Quantity to fill channel
Wo [mm]	Lo [mm]	Frame height E [mm]	Bar height G [mm]	Width [mm]	Length [mm]			
300	330	20	20	268	298	1.4301	416812	1
						1.4404	416813	
	630	20	20	268	298	1.4301	416812	2
						1.4404	416813	
	1030	20	20	268	499	1.4301	416814	2
						1.4404	416815	
	1530	20	20	268	499	1.4301	416814	3
						1.4404	416815	
	2030	20	20	268	499	1.4301	416814	4
						1.4404	416815	
	3030	20	20	268	499	1.4301	416814	6
						1.4404	416815	
	4030	20	20	268	499	1.4301	416814	8
						1.4404	416815	
400	430	30	30	368	398	1.4301	416820	1
						1.4404	416821	
	630	30	30	368	598	1.4301	416822	1
						1.4404	416823	
	830	30	30	368	398	1.4301	416820	2
						1.4404	416821	
500	530	30	30	468	499	1.4301	416828	1
						1.4404	416829	
	830	30	30	468	398	1.4301	416830	2
						1.4404	416831	
	1030	30	30	468	499	1.4301	416828	2
						1.4404	416829	
600	630	30	30	568	298	1.4301	416838	2
						1.4404	416839	
	930	30	30	568	298	1.4301	416838	3
						1.4404	416839	
	1230	30	30	568	298	1.4301	416838	4
						1.4404	416839	
800	830	30	30	768	398	1.4301	416842	2
						1.4404	416843	

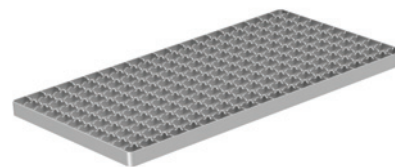
Order information - Load class M 125

Channel dimension		Grating dimension				Material	Item number	Quantity to fill channel
Wo [mm]	Lo [mm]	Frame height E [mm]	Bar height G [mm]	Width [mm]	Length [mm]			
200	530	20	30	168	499	1.4301	416804	1
						1.4404	416805	
	830	20	30	168	398	1.4301	416810	2
						1.4404	416811	
	1030	20	30	168	499	1.4301	416804	2
						1.4404	416805	
	1230	20	30	168	398	1.4301	416810	3
						1.4404	416811	
	1530	20	30	168	499	1.4301	416804	3
						1.4404	416805	
	2030	20	30	168	499	1.4301	416804	4
						1.4404	416805	
300	330	20	30	268	298	1.4301	416816	1
						1.4404	416817	
	630	20	30	268	298	1.4301	416816	2
						1.4404	416817	
	1030	20	30	268	499	1.4301	416818	2
						1.4404	416819	
	1530	20	30	268	499	1.4301	416818	3
						1.4404	416819	
	2030	20	30	268	499	1.4301	416818	4
						1.4404	416819	
	3030	20	30	268	499	1.4301	416818	6
						1.4404	416819	
	4030	20	30	268	499	1.4301	416818	8
						1.4404	416819	
400	430	30	30	368	398	1.4301	416824	1
						1.4404	416825	
	630	30	30	368	598	1.4301	416826	1
						1.4404	416827	
	830	30	30	368	398	1.4301	416824	2
						1.4404	416825	
500	530	30	30	468	499	1.4301	416832	1
						1.4404	416833	
	830	30	30	468	398	1.4301	416834	2
						1.4404	416835	
	1030	30	30	468	499	1.4301	416832	2
						1.4404	416833	

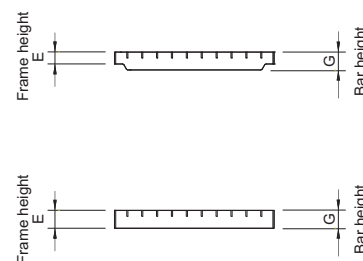
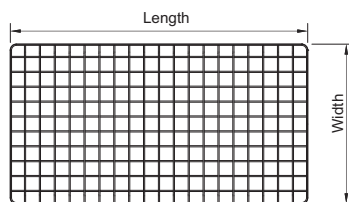
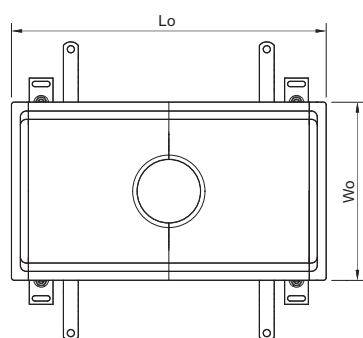
ACO mesh grating

Product information

- ACO mesh grating with either slip resistant finish
- Tested and certified according to EN 1253
- Designed for Load Class - L 15
- Surface - electropolished
- High flow capacity of grates
- Rounded corners
- Slip resistant
 - Slip resistant low potential for slip according to BS 7976-2,
 - R11 according to DIN 51130



Order information - Load class L 15

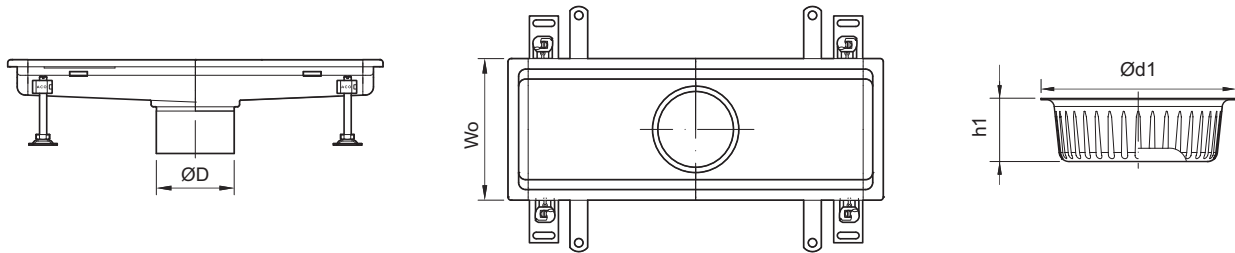


Channel dimension		Grating dimension				Material	Item number	Quantity to fill channel
Wo [mm]	Lo [mm]	Frame height E [mm]	Bar height G [mm]	Width [mm]	Length [mm]			
200	530	20	30	168	499	1.4301	416860	1
						1.4404	416861	
	830	20	30	168	398	1.4301	416862	2
						1.4404	416863	
	1030	20	30	168	499	1.4301	416860	2
						1.4404	416861	
	1230	20	30	168	398	1.4301	416862	3
						1.4404	416863	
	1530	20	30	168	499	1.4301	416860	3
						1.4404	416861	
	2030	20	30	168	499	1.4301	416860	4
						1.4404	416861	

Channel dimension		Grating dimension				Material	Item number	Quantity to fill channel
Wo [mm]	Lo [mm]	Frame height E [mm]	Bar height G [mm]	Width [mm]	Length [mm]			
300	330	20	30	268	298	1.4301	416864	1
						1.4404	416865	
	630	20	30	268	298	1.4301	416864	2
						1.4404	416865	
	1030	20	30	268	499	1.4301	416866	2
						1.4404	416867	
	1530	20	30	268	499	1.4301	416866	3
						1.4404	416867	
	2030	20	30	268	499	1.4301	416866	4
						1.4404	416867	
	3030	20	30	268	499	1.4301	416866	6
						1.4404	416867	
	4030	20	30	268	499	1.4301	416866	8
						1.4404	416867	
400	430	30	30	368	398	1.4301	416868	1
						1.4404	416869	
	630	30	30	368	598	1.4301	416870	1
						1.4404	416871	
	830	30	30	368	398	1.4301	416868	2
						1.4404	416869	
500	530	30	30	468	499	1.4301	416872	1
						1.4404	416873	
	830	30	30	468	398	1.4301	416874	2
						1.4404	416875	
	1030	30	30	468	499	1.4301	416872	2
						1.4404	416873	
600	630	30	30	568	298	1.4301	416876	2
						1.4404	416877	
	930	30	30	568	298	1.4301	416876	3
						1.4404	416877	
	1230	30	30	568	298	1.4301	416876	4
						1.4404	416877	
800	830	30	30	768	398	1.4301	416878	2
						1.4404	416879	

Accessories for ACO hygienic box channel

Silt baskets for ACO hygienic box channel



Channel dimension		Direction of gully outlet	Silt basket dimension		Capacity [l]	Material	Item number
Width W0 [mm]	Outlet ØD [mm]		Ød1 [mm]	h1 [mm]			
200, 300, 400, 500, 600, 800	125	vertical, horizontal	142	45	0,4	1.4301	416900
						1.4404	416901
200	142	vertical	142	45	0,4	1.4301	416900
						1.4404	416901
		horizontal	142	25	0,3	1.4301	416902
						1.4404	416903
	welded with ACO hygienic gully 142	vertical, horizontal	142	25	0,3	1.4301	416902
						1.4404	416903
300, 400, 500, 600, 800	142 or welded with ACO hygienic gully 157	vertical	159	50	0,6	1.4301	416904
						1.4404	416905
		horizontal	159	26	0,3	1.4301	416906
						1.4404	416907
	200 or welded with ACO hygienic gully 218	vertical	222	50	0,7	1.4301	416908
						1.4404	416909
		horizontal	222	26	0,4	1.4301	416910
						1.4404	416911

ACO customized box channel

Product information

The dimensions of the ACO customized box channel for concrete, tiles and resin floor can be easily specified in respect of project requirements.

- Available in 1.4301 (304) or 1.4404 (316L) grades of stainless steel, pickled and passivated
- Material thickness 1,5 mm or 2 mm
- Width – up to customer request
- Length – up to customer request
- Depth – up to customer request
- Variable shape of channel – T shape, L shape, ...
- Longitudinal slopes of the channel bottom 1-5 %
- Outlet position central or variable in longitudinal axis or excentric outlet
- Adjustable leveling feet
- Anchors for fixing in concrete

Customization template

Instruction



Yellow field means fully hygienic solution.

Step 1 - Material

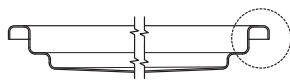


Stainless steel grade 1.4301 (AISI 304)

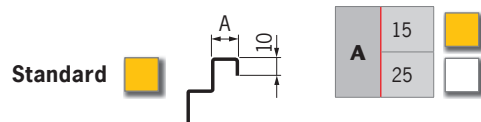
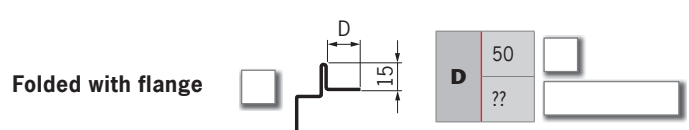
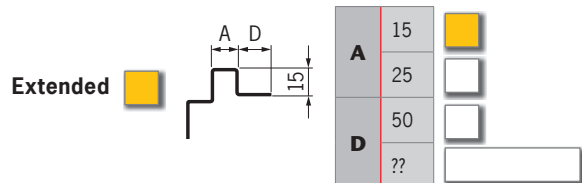


Stainless steel grade 1.4404 (AISI 316L)

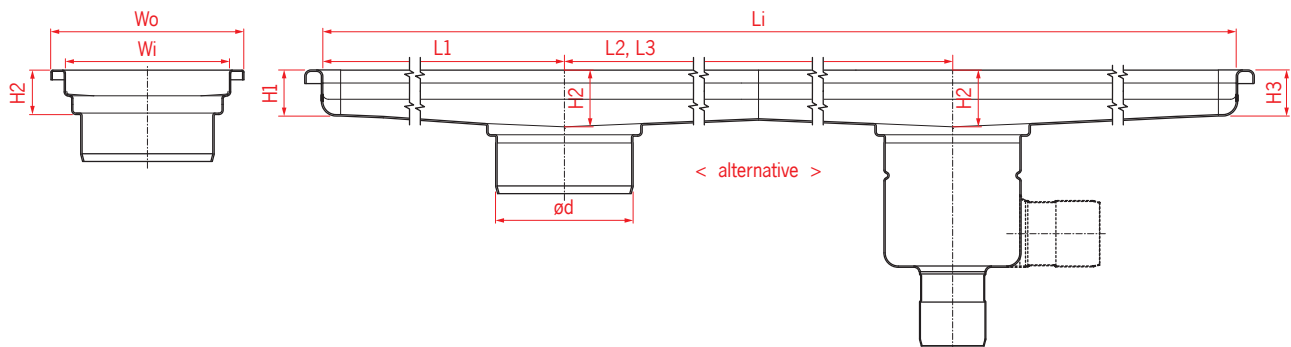
Step 2 - Edge profiles



Detail of the Edge profile



Step 3 - Channel dimensions



Width overall/ internal Wo/Wi
200/170
300/270
400/370
500/470
600/570
800/770
Customized width



Channel bottom height	
	H2
Slope	
No	
Yes - slope 1%	
Yes - with defined height	H1
	H3



Channel lengths
Li
L1
L2
L3
L4



Step 4 - Gully

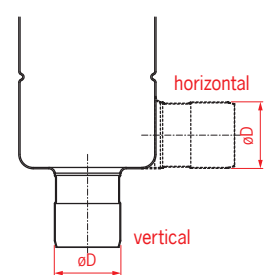
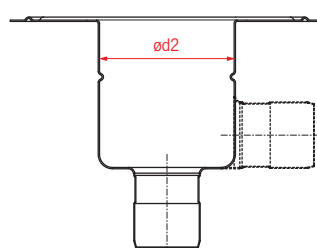
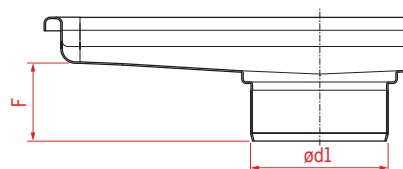
Outlet pipe



Telescopic gully



Welded gully



Outlet
Diameter of outlet ød1
75
110
125
142
200



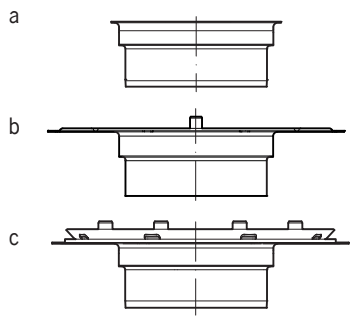
Vertical gully		Horizontal gully	
Diameter of gully body ød2	Diameter of outlet pipe ØD	Diameter of gully body ød2	Diameter of outlet pipe ØD
142 (1.4 l/s)	75	142 (1.4 l/s)	75
142 (1.6 l/s)	110	142 (1.6 l/s)	110
157 (2.7 l/s)	75	157 (2.6 l/s)	75
157 (3.5 l/s)	110	157 (2.8 l/s)	110
218 (5,0 l/s)	110	218 (4.4 l/s)	110
218 (5,0 l/s)	160		



Outlet lenght F
36
58
150
Customized lenght



Flange (only for telescopic gully)
Location (a)
Bonding (b)
Clamping (c)



Step 5 - Channel accessories

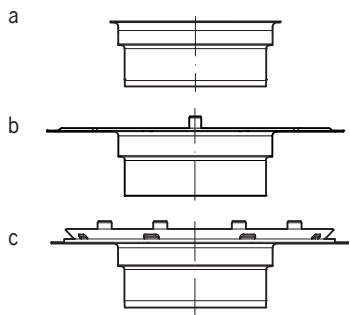
Foul air trap (FAT)
With FAT
Without FAT



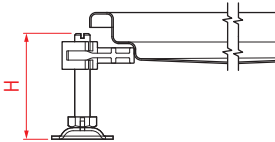
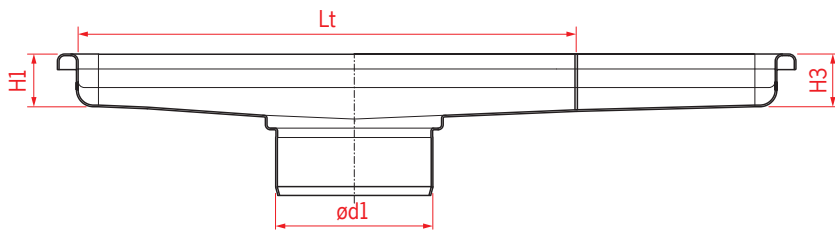
Silt basket
With Silt basket
Without Silt basket



Raising piece
Location flange (a)
Bonding flange (b)
Clamping flange (c)



Step 6 - Delivery requirements



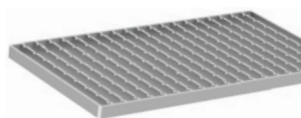
Transport connection Lt
6000 (standard)
3000
2000



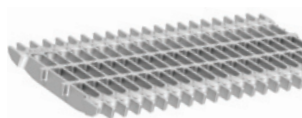
Leveling feet H
70 (standard)
200



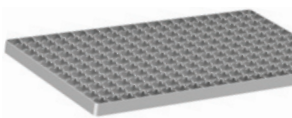
Yes ☐

No ☐

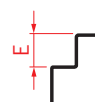
ACO hygienic ladder grating	
Antislip	
Plain	
Load class	
R 50	
M 125	
N 250	
P 400	



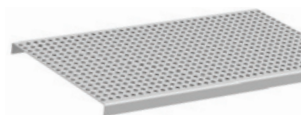
ACO hygienic cast grating	
Antislip	
-	
Load class	
M 125 (max. Wo = 300)	



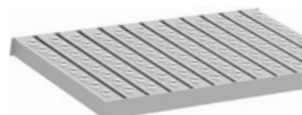
ACO mesh grating	
Antislip	
Plain	
Load class	
L 15	
R 50 (max. Wo = 200)	
M 125 (max. Wo = 300)	



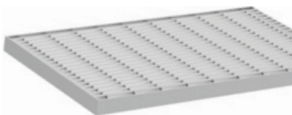
Height of gratings E	
20	
25	
30	
40	



ACO perforated grating	
Load class	
L 15	



ACO multi-slot 5 grating	☐
Load class	
L 15	☐
R 50 (max. Wo = 200)	☐



ACO heelsafe grating	
Load class	
L 15 (max. Wo = 200)	

Other please specify

[illegible]

Introduction

ACO slot channel portfolio

The ACO slot channel range covers channels for all common applications and all common floor types (concrete, tiles, resin or vinyl). Selecting a channel from the range is easy. The unique variability of the whole portfolio allows choosing the right channel according to all customers' needs.

Channel's length, depth and outlet position are just a few of the parameters which can be varied and, regardless of the variations specified, there is no impact on delivery lead times.

ACO slot channel ordering

The dimensions of the ACO slot channel can be easily specified in respect of project requirements. To specify the channel please use the Specification template (see page 107) which will help you to identify the information needed or contact our Sales/Technical department.

ACO slot channel customization

In addition all ACO slot channel can be designed with:

- Special outlet position
- Special depth
- Special slope
- Special slot channel width
- L-shape and T-shape layout
- Special side inlets

To request customised ACO slot channel, please contact our Sales/technical department.

ACO slot channel system overview

ACO slot channel - fixed height solution



ACO slot channel - telescopic solution



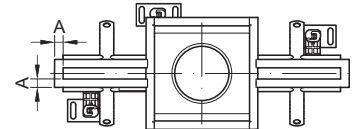
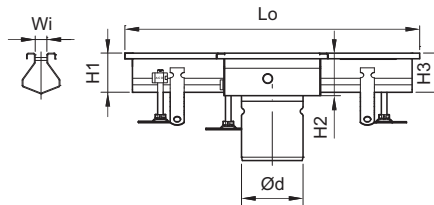
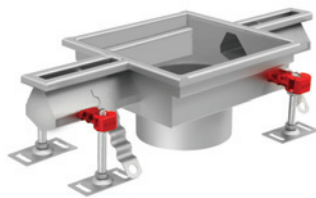
ACO slot channel - semi-standard

Product information

The dimensions of the ACO slot channel for concrete, tiles and resin floor can be easily specified in respect of project requirements.

- Tested and certified according to EN 1253
- Available in 1.4301 (304) or 1.4404 (316L) grades of stainless steel, pickled and passivated
- 1,5 mm material thickness
- ACO slot channel 8 or 20 mm
- Length – up to customer request
- Longitudinal slopes of the channel bottom 1-5 %
- Standardized widths
- Outlet position central or variable in longitudinal axis
- Adjustable leveling feet
- Anchors for fixing in concrete

Order information



External (overall) width Wi [mm]	Dimension of edge A [mm]	Length of channel Lo	Height at outlet of channel H2	Height at end of channel H1 and H3
20	15	Variable *	50-200	50-200
8	folded		50-200	50-200

* Long channels over 6 m are standard divided in 6 m sections with transport joins.

ACO customized slot channel

Product information

The dimensions of the ACO customized slot channel for concrete, tiles and resin floor can be easily specified in respect of project requirements.

- Tested and certified according to EN 1253
- Available in 1.4301 (304) or 1.4404 (316L) grades of stainless steel, pickled and passivated
- 1,5 mm material thickness
- Slot of channel 8 or 20
- Length – up to customer request
- Longitudinal slopes of the channel bottom 1-5 %
- Outlet position central or variable in longitudinal axis
- Adjustable leveling feet
- Anchors for fixing in concrete

Customization template

Step 1 - Material

☐ Stainless steel grade 1.4301 (AISI 304)

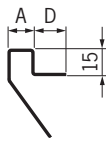
☐ Stainless steel grade 1.4404 (AISI 316L)

Step 2 - Edge profiles



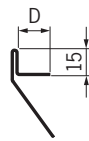
Detail of the Edge profile

Extended



A	15	☐
	25	☐
D	50	☐
	??	☐

Folded with flange



D	50	☐
	??	☐

Standard



A	15	☐
	25	☐

Edge infill



rubber



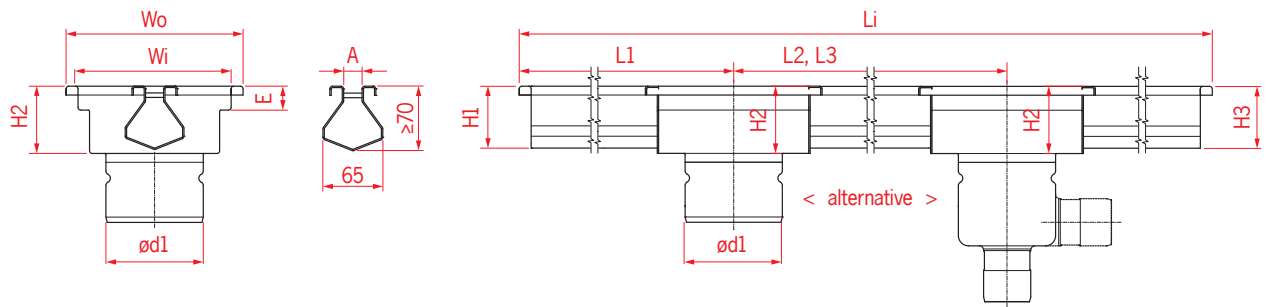
steel



Folded



Step 2 - Edge profiles



Gully top dimension Wo	Channel outlet d1
200 x 200	75
200 x 200	110
200 x 200	125
250 x 250	142
300 x 300	200
Customized width	

Channel bottom height	
	H2
Slope	
No	
Yes - slope 1%	
Yes - with defined height	
	H1
	H3

Channel lengths	
Li	
L1	
L2	
L3	

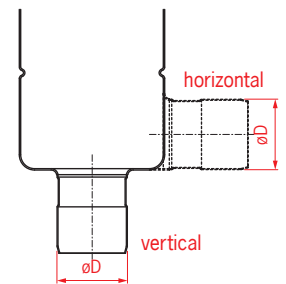
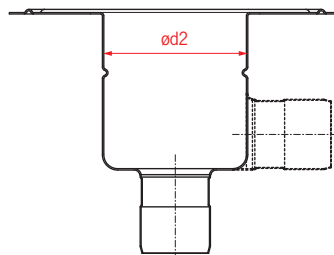
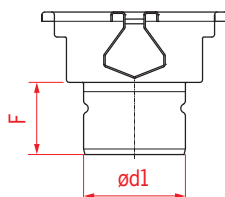
Slot dimension A
8
20

Step 3 - Gully

Outlet pipe ☐

Telescopic gully ☐

Welded gully ☐



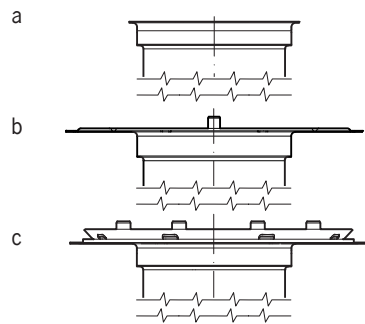
Channel outlet	
Diameter of outlet Wo	Diameter of outlet Ød1
200 x 200	75
200 x 200	110
200 x 200	125
250 x 250	142
300 x 300	200

Vertical gully		Horizontal gully	
Diameter of gully body Ød2	Diameter of outlet pipe ØD	Diameter of gully body Ød2	Diameter of outlet pipe ØD
142 (1.4 l/s)	75	142 (1.4 l/s)	75
142 (1.6 l/s)	110	142 (1.6 l/s)	110
157 (2.7 l/s)	75	157 (2.6 l/s)	75
157 (3.5 l/s)	110	157 (2.8 l/s)	110
218 (5.0 l/s)	110	218 (4.4 l/s)	110
218 (5.0 l/s)	160		

Outlet lenght F
36
58
150

☐
☐
☐

Flange (only for telescopic gully)
Location (a)
Bonding (b)
Clamping (c)

☐
☐
☐

Step 4 - Channel accessories

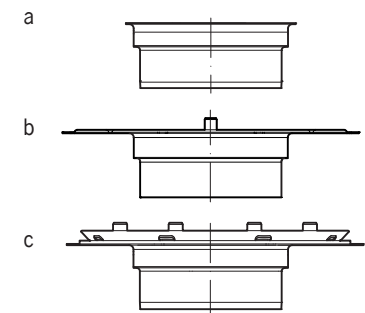
Foul air trap (FAT)
With FAT
Without FAT

☐
☐

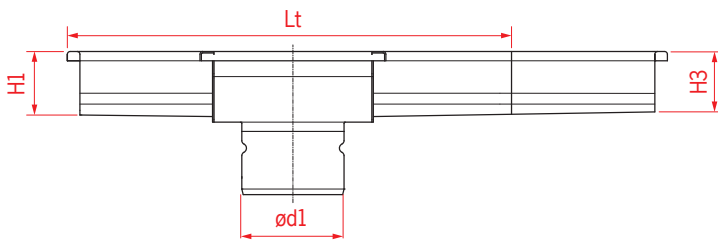
Silt basket
With Silt basket
Without Silt basket

☐
☐

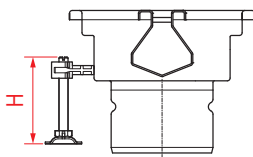
Raising piece
Location flange (a)
Bonding flange (b)
Clamping flange (c)

☐
☐
☐

Step 5 - Delivery requirements

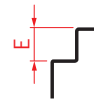
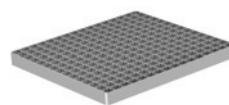


Transport connection Lt
6000 (standard)
3000
2000

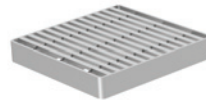
☐
☐
☐

Leveling feet H
70 (standard)
200

☐
☐

Yes ☐No ☐

Height of gratings E	
20	☐
25	☐
30	☐
40	☐



ACO heelsafe grating	
Load class	
L 15	

A full-page sheet of graph paper featuring a uniform grid of small squares. The grid consists of 20 columns and 20 rows, creating a total of 400 squares. The lines are thin and light gray, set against a white background. There are no margins, text, or other markings on the page.

Your specification/shape of the channel, outlet position

This image shows a full page of blank graph paper. The grid consists of small, uniform squares formed by thin, light gray lines. There are no margins, text, or other markings on the page.

Introduction

ACO modular channel portfolio

The ACO modular channel range includes channels for all common applications and all common floor types (concrete, tiles, resin or vinyl). Selecting a channel from the range is easy. The unique variability of the whole portfolio makes it easy to choose the right channel according to a specific customer's needs.

Channel's length, depth and outlet position are just a few of the parameters which can be varied and, regardless of the variations specified, there is no impact on delivery lead times.

ACO modular channel ordering

The dimensions of the ACO modular channel can be easily specified in respect of project requirements.

ACO modular channel customization

In addition, all ACO modular channels can be designed to a special length.

To request customised ACO modular channel, please contact our Sales/ Technical department.

ACO modular channel system overview



ACO modular box channel 125



ACO modular box channel 200

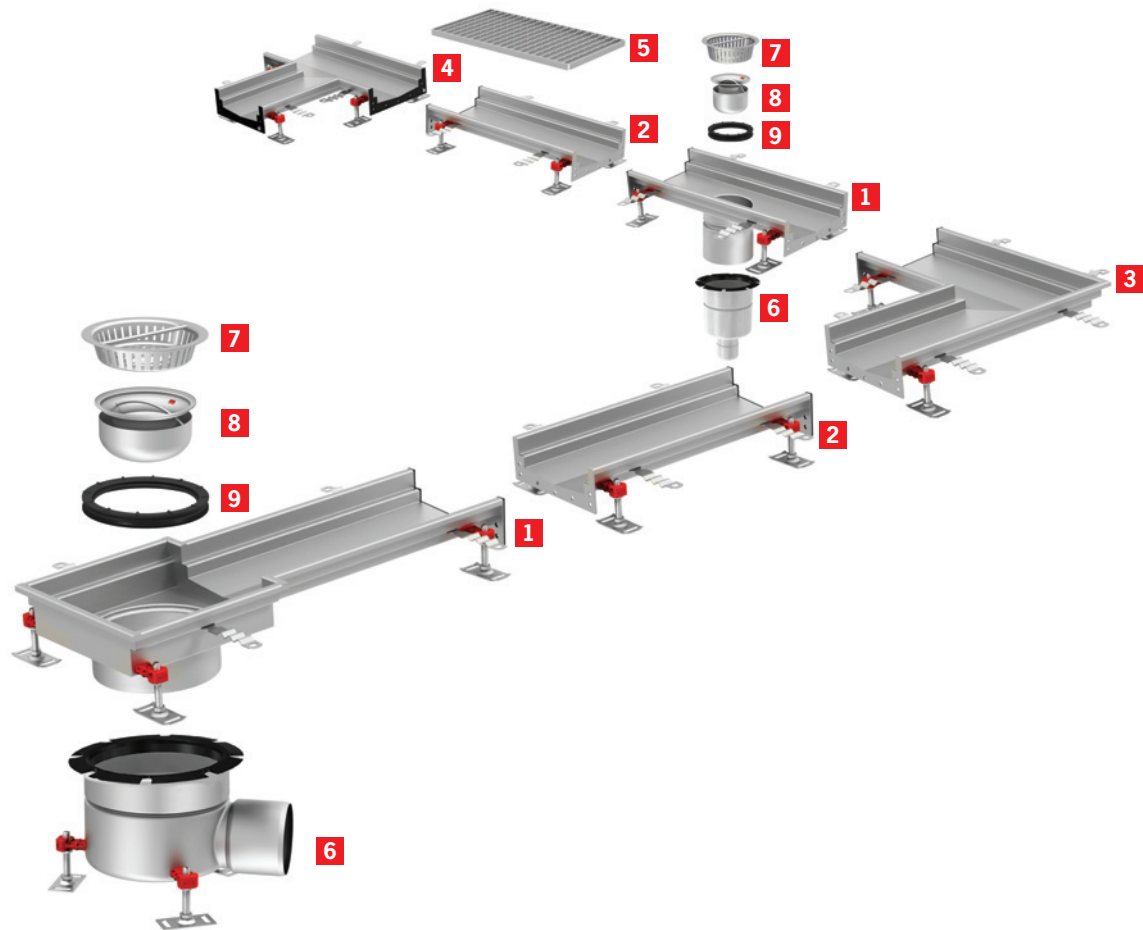


ACO modular slot channel 20

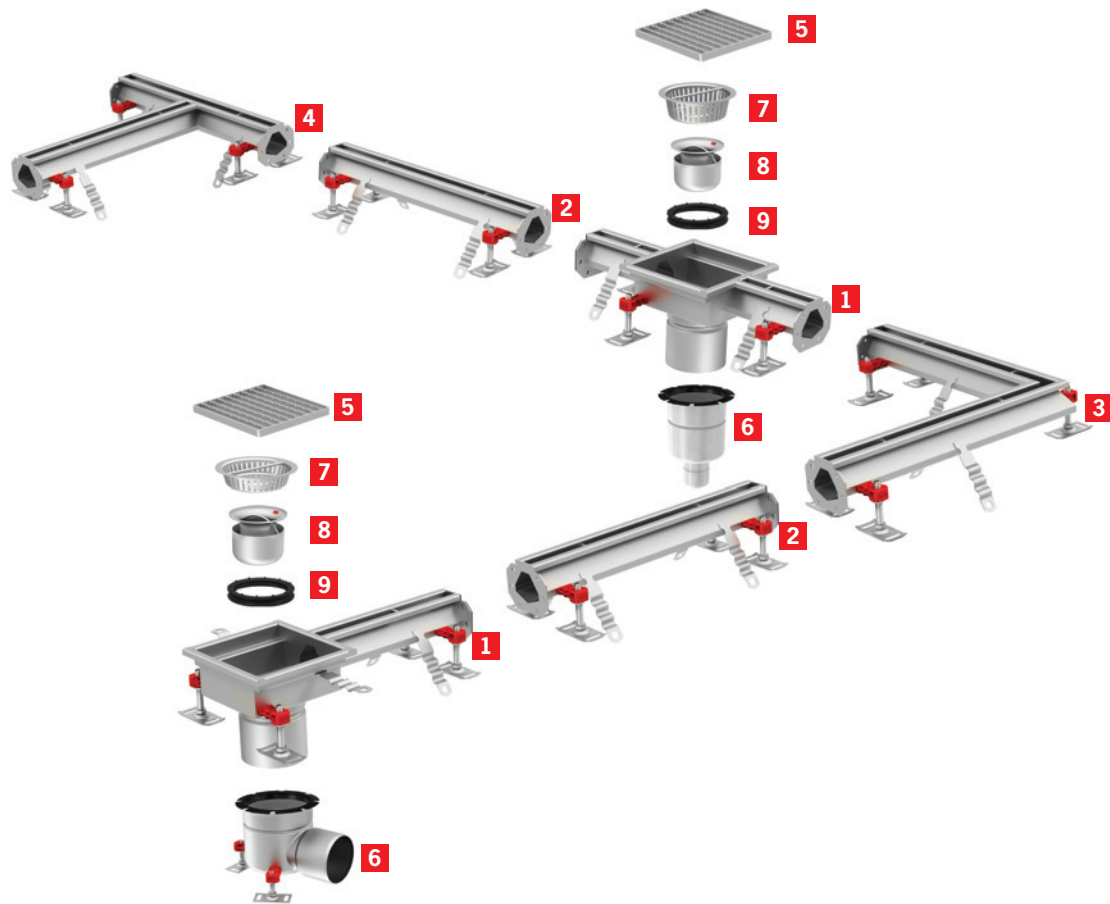


**ACO gully
with accessories**

ACO modular box channel system overview



ACO modular slot channel system overview



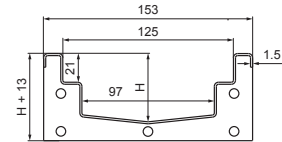
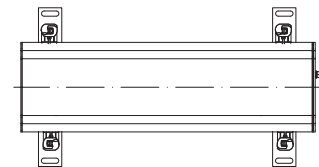
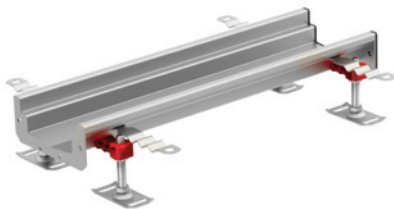
- | | |
|--|--------------------------------|
| 1 Outlet unit | 6 Gully |
| 2 Level invert and sloping invert channel | 7 Silt basket |
| 3 Corner unit | 8 Foul air trap |
| 4 Branch unit | 9 Foul air trap support |
| 5 Grating | |

ACO modular box channel 125 - standard articles
Product information

Modular concept allows specification of standard channel units to surround machinery and fit within existing tiling patterns.

Vee-bottomed (V) profiled channel for enhanced flow efficiency at low flow rates and for improved self cleaning performance.

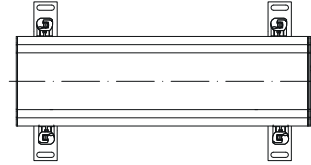
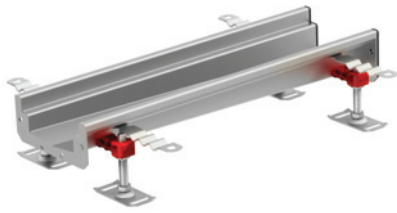
- Fully compliant to EN 1253
- Fully tested and classified to EN 1433
- Available in 1.4301 (304) or 1.4404 (316L) grades of stainless steel
- Fully pickled and passivated
- Easy and secure telescopic connection with gully
- Cut on demand items available to minimize works on site
- Wide range of gratings for load class up to C 250 (EN 1433)


Level invert channel


Dimensions		Item number	
L [mm]	H [mm]	1.4301	1.4404
500	50	105119	407211
	65	105120	407212
	80	105121	407213
	95	105122	407214
	110	105123	407215
	125	105124	407216
1000	50	105127	407217
	65	105128	407218
	80	105129	407219
	95	105130	407220
	110	105131	407221
	125	105132	407222
2000	50	105135	407223
	65	105136	407224
	80	105137	407225
	95	105138	407226
	110	105139	407227
	125	105140	407228
3000	50	105143	407229
	65	105144	407230
	80	105145	407231
	95	105146	407232
	110	105147	407233
	125	105148	407234

Note: Items are equipped with seal and connecting material on one site.

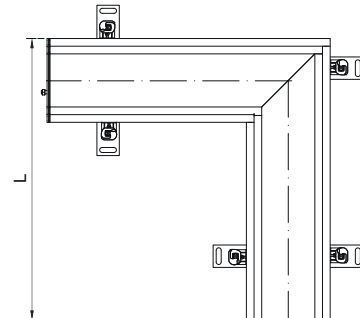
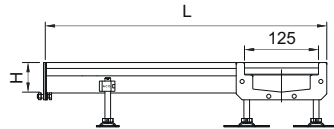
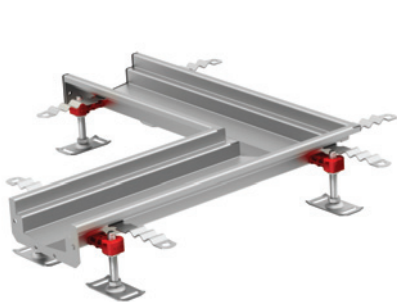
Sloping invert channel



L [mm]	Dimensions		Item number	
	H1 [mm]	H2 [mm]	1.4301	1.4404
500	50	65	105151	407235
	65	80	105152	407236
1000	50	65	105155	407237
	65	80	105156	407238
	80	95	105157	407239
	95	110	105158	407240
2000	50	65	105161	407241
	65	80	105162	407242
	80	95	105163	407243
	95	110	105164	407244
	110	125	105165	407245
3000	50	65	105168	407246
	65	80	105169	407247
	80	95	105170	407248
	95	110	105171	407249
	110	125	105172	407250
6000	50	80	408821	408824
	65	95	408822	408825
	95	125	408823	408826

Note: Items are equipped with seal and connecting material on deeper site.

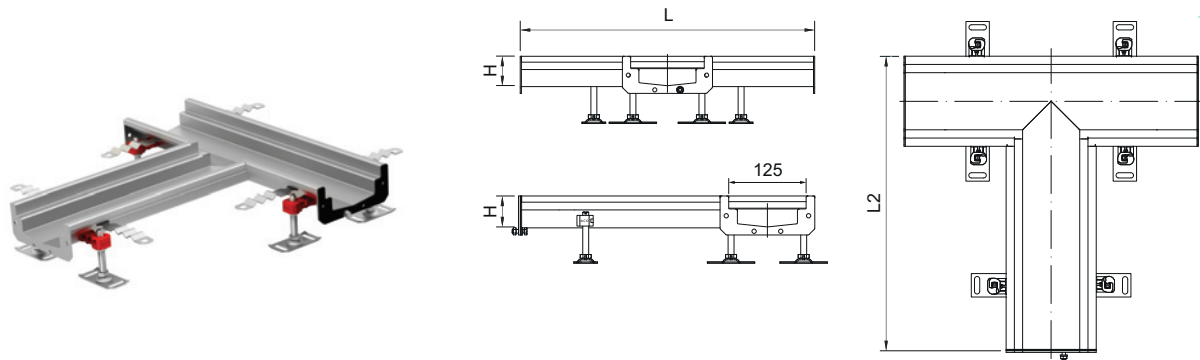
Corner unit



L [mm]	Dimensions		Item number	
	H [mm]		1.4301	1.4404
515	50		409812	409818
	65		409813	409819
	80		409814	409820
	95		409815	409821
	110		409816	409822
	125		409817	409823

Note: Items are equipped with seal and connecting material on one site.

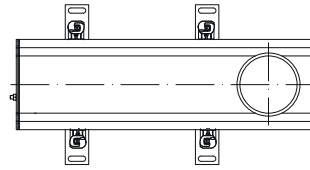
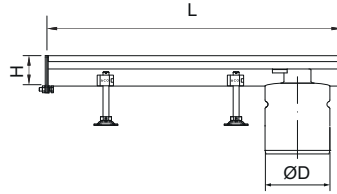
Branch unit



Dimensions			Item number	
L1 [mm]	L2 [mm]	H [mm]	1.4301	1.4404
500	515	50	409824	409830
		65	409825	409831
		80	409826	409832
		95	409827	409833
		110	409828	409834
		125	409829	409835

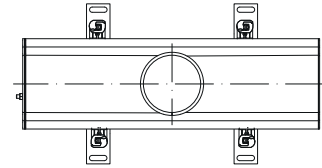
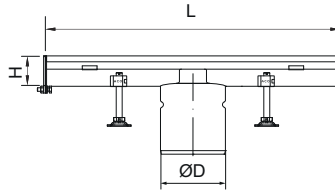
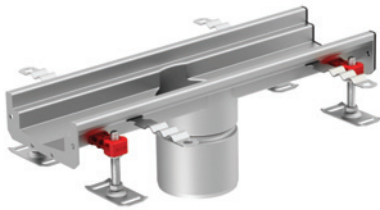
Note: Items are equipped with seal and connecting material on one site.

End outlet



Dimensions		Gully	Outlet diameter ØD [mm]	Item number	
L [mm]	H [mm]			1.4301	1.4404
500	50	ACO gully EG150	110	105175	407251
	65			105176	407252
	80			105177	407253
	95			105178	407254
	110			105179	407255
	125			105180	407256
1000	50			105183	407257
	65			105184	407258
	80			105185	407259
	95			105186	407260
	110			105187	407261
	125			105188	407262
500	50	ACO hygienic gully 142	125	415946	415991
	65			415947	415992
	80			415948	415993
	95			415949	415994
	110			415950	415995
	125			415951	415996
1000	50			415952	415997
	65			415953	415998
	80			415954	415999
	95			415955	416000
	110			415956	416001
	125			415957	416002
500	50	ACO hygienic gully 157	142	409732	409733
	65			409736	409737
	80			409740	409741
	95			409744	409745
	110			409724	409725
	125			409728	409729
1000	50			409708	409709
	65			409712	409713
	80			409716	409717
	95			409720	409721
	110			409700	409701
	125			409704	409705

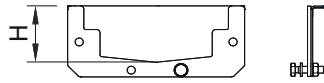
Note: Items are without seal and connecting material.

Centre outlet


Dimensions		Gully	Outlet diameter ØD [mm]	Item number	
L [mm]	H [mm]			1.4301	1.4404
500	50	ACO gully EG150	110	105191	407263
	65			105192	407264
	80			105193	407265
	95			105194	407266
	110			105195	407267
	125			105196	407268
1000	50			105199	407269
	65			105200	407270
	80			105201	407271
	95			105202	407272
	110			105203	407273
	125			105204	407274
500	50	ACO hygienic gully 142	125	415958	416003
	65			415959	416004
	80			415960	416005
	95			415961	416006
	110			415962	416007
	125			415963	416008
1000	50			415964	416009
	65			415965	416010
	80			415966	416011
	95			415967	416012
	110			415968	416013
	125			415969	416014
500	50	ACO hygienic gully 157	142	409734	409735
	65			409738	409739
	80			409742	409743
	95			409746	409747
	110			409726	409727
	125			409730	409731
1000	50			409710	409711
	65			409714	409715
	80			409718	409719
	95			409722	409723
	110			409702	409703
	125			409706	409707

Note: Items are without seal and connecting material.

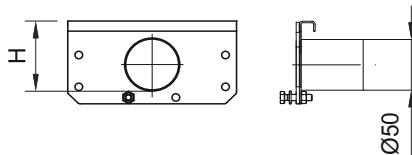
End plate



Dimensions H [mm]	Item number	
	1.4301	1.4404
50	105100	407196
65	105101	407197
80	105102	407198
95	105103	407199
110	105104	407200
125	105105	407201

Note: Items are equipped with seal and connecting material.

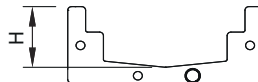
End plate with 50 mm outlet



Dimensions H [mm]	Item number	
	1.4301	1.4404
65	409114	409119
80	409115	409120
95	409116	409121
110	409117	409122
125	409118	409123

Note: Items are equipped with seal and connecting material.

Seal rubber

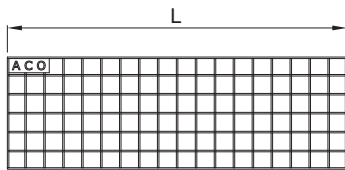


Dimensions H [mm]	Item number	
	NBR	
50	413587	
65	413588	
80	413589	
95	413590	
110	413591	
125	413592	

Note: Items include seal and connecting material.

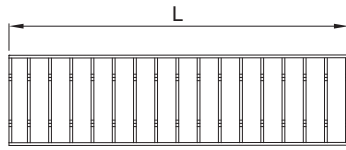
Gratings for ACO modular box channel 125
Product information

- Fully tested and classified to EN 1433
- Available in 1.4301 (304) or 1.4404 (316L) grades of stainless steel
- Special length 375 mm for branches and corner units
- Slip resistant gratings available for added user safety
- Load classes A 15, B 125 and C 250

ACO mesh grating


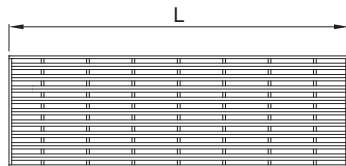
Length L [mm]	Load class	Slip resistant	Material	Item number
375	A 15	No	1.4301	414132
			1.4404	414182
	C 250	Yes	1.4301	414130
			1.4404	414180
		No	1.4301	414133
			1.4404	414183
500	A 15	No	1.4301	21720
			1.4404	21725
	C 250	Yes	1.4301	21710
			1.4404	21715
		No	1.4301	21920
			1.4404	21925
1000	A 15	No	1.4301	21620
			1.4404	21625
	C 250	Yes	1.4301	21610
			1.4404	21615
		No	1.4301	21820
			1.4404	21825
		Yes	1.4301	21810
			1.4404	21815

ACO ladder grating



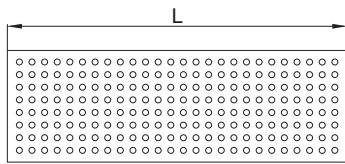
Length L [mm]	Load class	Slip resistant	Material	Item number
375	C 250	Yes	1.4301	414134
			1.4404	414184
500	C 250	Yes	1.4301	21740
			1.4404	21745
1000	C 250	Yes	1.4301	21741
			1.4404	21746

ACO heelsafe grating



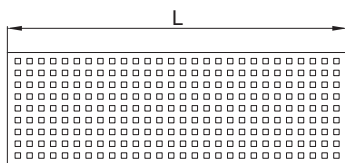
Length L [mm]	Load class	Slip resistant	Material	Item number
375	B 125	No	1.4301	414135
			1.4404	414185
500	B 125	No	1.4301	96819
			1.4404	401238
1000	B 125	No	1.4301	96818
			1.4404	401237

ACO perforated grating



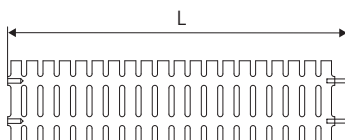
Length L [mm]	Load class	Slip resistant	Material	Item number
375	A 15	No	1.4301	414136
			1.4404	414186
	B 125	No	1.4301	414137
			1.4404	414187
500	A 15	No	1.4301	21760
			1.4404	21765
	B 125	No	1.4301	21960
			1.4404	21965
1000	A 15	No	1.4301	21660
			1.4404	21665
	B 125	No	1.4301	21860
			1.4404	21865

ACO quadrato grating



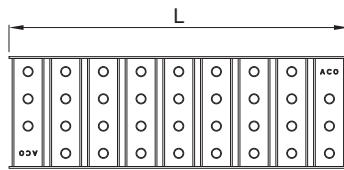
Length L [mm]	Load class	Slip resistant	Material	Item number
375	A 15	No	1.4301	414138
			1.4404	414188
500	A 15	No	1.4301	105528
			1.4404	407925
1000	A 15	No	1.4301	105527
			1.4404	407924

ACO plastic grating



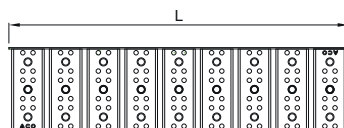
Length L [mm]	Load class	Slip resistant	Material	Item number
500	A 15	No	-	21790
1000	A 15	No	-	21690

ACO multi-slot 5 grating



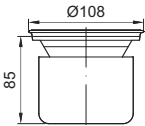
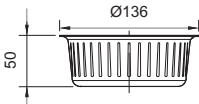
Length L [mm]	Load class	Slip resistant	Material	Item number
375	A 15	Yes	1.4301	414139
			1.4404	414189
500	A 15	Yes	1.4301	409290
			1.4404	409291
	B 125	Yes	1.4301	409294
			1.4404	409295
1 000	A 15	Yes	1.4301	409286
			1.4404	409287
	B 125	Yes	1.4301	409236
			1.4404	409237
500	A 15	Yes	1.4301	409290
			1.4404	409291
	B 125	Yes	1.4301	409294
			1.4404	409295
1 000	A 15	Yes	1.4301	409286
			1.4404	409287
	B 125	Yes	1.4301	409236
			1.4404	409237

ACO multi-slot 8 grating



Length L [mm]	Load class	Slip resistant	Material	Item number
500	A 15	Yes	1.4301	415739
			1.4404	415740
	B 125	Yes	1.4301	415747
			1.4404	415748
	C 250	Yes	1.4301	415753
			1.4404	415754
1 000	A 15	Yes	1.4301	415735
			1.4404	415736
	B 125	Yes	1.4301	415743
			1.4404	415744
	C 250	Yes	1.4301	415751
			1.4404	415752

Accessories for ACO modular box channel 125

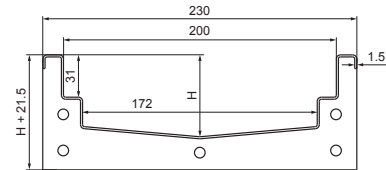
	Description	Used with	Material	Item number
	Sieve ■ Stainless steel	■ ACO modular box channel 125 with outlet 110 mm	1.4301	97235
			1.4404	97285
	Foul air trap ■ Stainless steel ■ Water seal 50 mm	■ ACO modular box channel 125 with outlet 110 mm	1.4301	97217
			1.4404	97267
	Silt basket ■ Stainless steel ■ 0,5 litre capacity	■ ACO modular box channel 125 with outlet 125 and 142 mm	1.4301	414339
			1.4404	414340

ACO modular box channel 200 - standard articles

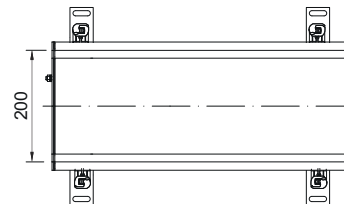
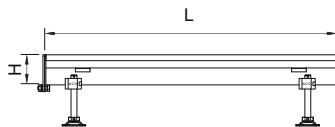
Product information

Modular concept allows specification of standard channel units to surround machinery and fit within existing tiling patterns.

- Fully compliant to EN 1253
- Fully tested and classified to EN 1433
- Available in 1.4301 (304) or 1.4404 (316L) grades of stainless steel
- Fully pickled and passivated
- Easy and secure telescopic connection with gully
- Cut on demand items available to minimize works on site
- Wide range of gratings for load class up to C 250 (EN 1433)



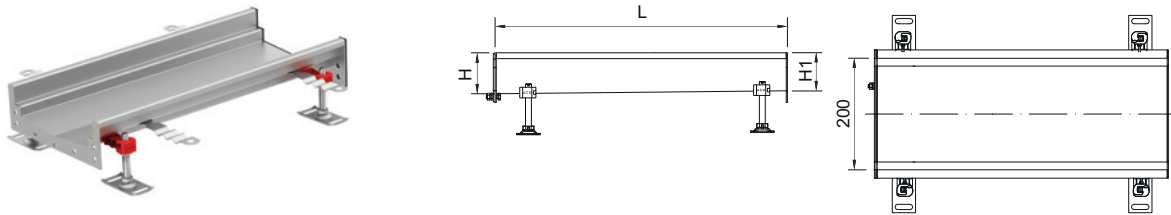
Level invert channel



Dimensions		Item number	
L [mm]	H [mm]	1.4301	1.4404
500	60	409072	409050
	70	409047	409051
	80	409048	409052
	100	409049	409053
1000	60	401859	401860
	70	409054	409057
	80	409055	409058
	100	409056	409059
2000	60	401875	401876
	70	409060	409063
	80	409061	409064
	100	409062	409065
3000	60	401895	401896
	70	409066	409069
	80	409067	409070
	100	409068	409071

Note: Items are equipped with seal and connecting material on one site.

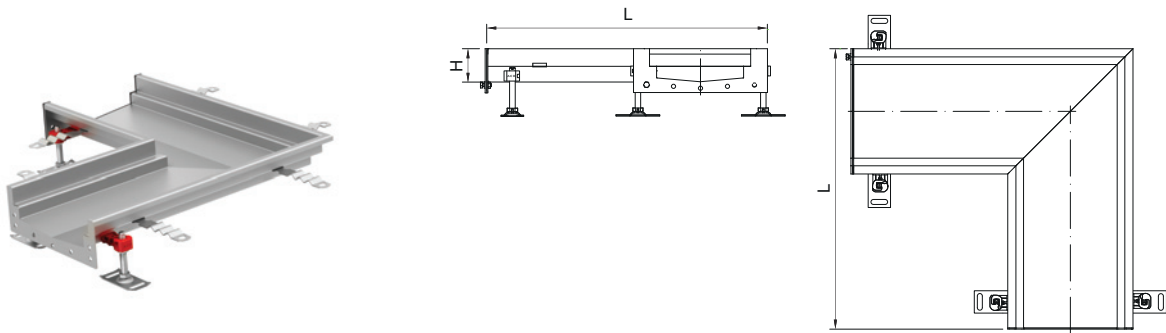
Sloping invert channel



L [mm]	Dimensions		Item number	
	H1 [mm]	H2 [mm]	1.4301	1.4404
500	55	60	401855	401856
1000	60	70	401871	401872
	70	80	402464	402465
	80	90	402466	402467
	90	100	402468	402469
	100	110	402470	402471
	110	120	402480	402481
2000	60	70	401887	401888
	70	80	402472	402473
	80	90	402474	402475
	90	100	402476	402477
	100	110	402478	402479
	110	120	402480	402481
3000	60	80	402482	402483
	80	100	402484	402485
	100	120	402486	402487
	120	140	402488	402489
6000	60	100	408827	408829
	100	140	408828	408830

Note: Items are equipped with seal and connecting material on deeper site.

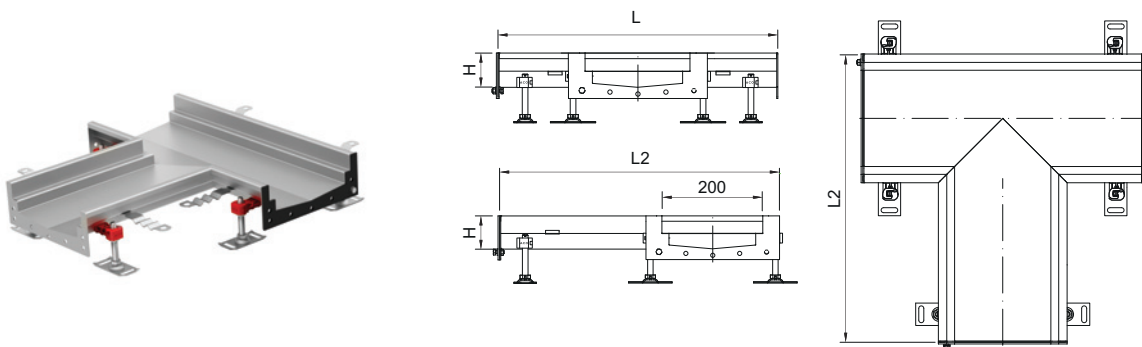
Corner unit



Dimensions		Item number	
L [mm]	H [mm]	1.4301	1.4404
515	60	401921	401922
	80	402490	402491
	100	402492	402493

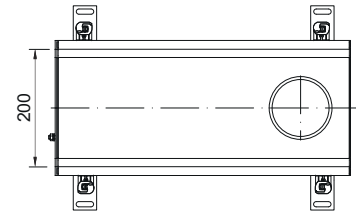
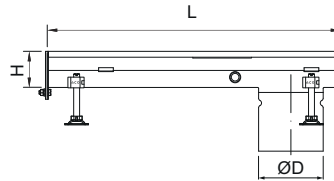
Note: Items are equipped with seal and connecting material on one site.

Branch unit



Dimensions			Item number	
L [mm]	H1 [mm]	H2 [mm]	1.4301	1.4404
500	515	60	401933	401934
		80	402494	402495
		100	402496	402497

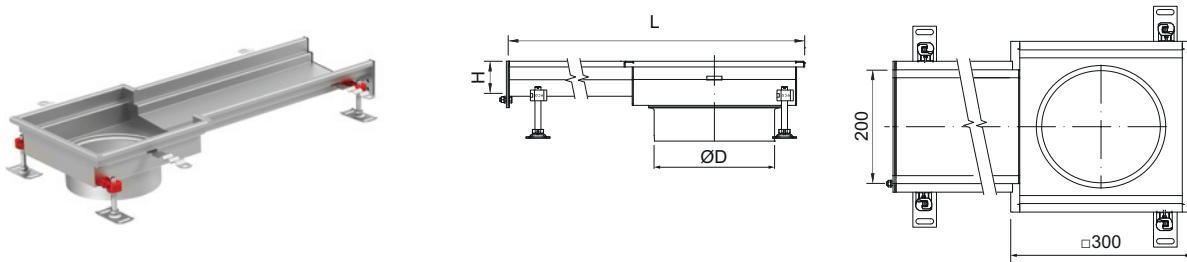
Note: Items are equipped with seal and connecting material on one site.

End outlet


Dimensions		Gully	Outlet diameter ØD [mm]	Item number	
L [mm]	H [mm]			1.4301	1.4404
500	60	ACO gully EG150	110	414275	414283
	70			414276	414284
	80			414277	414285
	90			414278	414286
	100			414279	414287
	110			414280	414288
	120			414281	414289
	140			414282	414290
1000	60			414291	414299
	70			414292	414300
	80			414293	414301
	90			414294	414302
	100			414295	414303
	110			414296	414304
	120			414297	414305
	140			414298	414306
500	60	ACO hygienic gully 157	142	409900	409908
	70			409901	409909
	80			409902	409910
	90			409903	409911
	100			409904	409912
	110			409905	409913
	120			409906	409914
	140			409907	409915
1000	60			409932	409940
	70			409933	409941
	80			409934	409942
	90			409935	409943
	100			409936	409944
	110			409937	409945
	120			409938	409946
	140			409939	409947

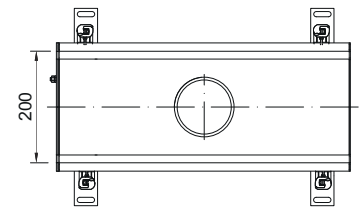
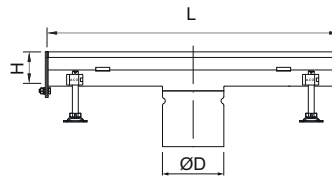
Note: Items are without seal and connecting material.

End outlet



Dimensions		Gully	Outlet diameter ØD [mm]	Item number	
L [mm]	H [mm]			1.4301	1.4404
785	60	ACO hygienic gully 218	200	414259	414267
	70			414260	414268
	80			414261	414269
	90			414262	414270
	100			414263	414271
	110			414264	414272
	120			414265	414273
	140			414266	414274

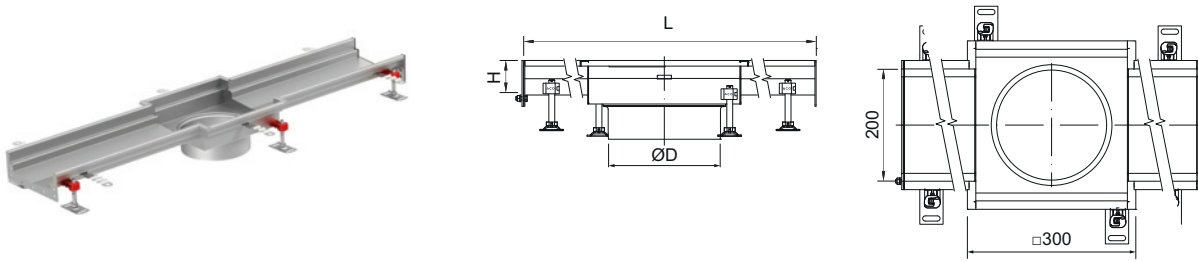
Note: Items are without seal and connecting material.

Centre outlet


Dimensions		Gully	Outlet diameter ØD [mm]	Item number	
L [mm]	H [mm]			1.4301	1.4404
500	60	ACO gully EG150	110	414307	414315
	70			414308	414316
	80			414309	414317
	90			414310	414318
	100			414311	414319
	110			414312	414320
	120			414313	414321
	140			414314	414322
1000	60			414323	414331
	70			414324	414332
	80			414325	414333
	90			414326	414334
	100			414327	414335
	110			414328	414336
	120			414329	414337
	140			414330	414338
500	60	ACO hygienic gully 157	142	409916	409924
	70			409917	409925
	80			409918	409926
	90			409919	409927
	100			409920	409928
	110			409921	409929
	120			409922	409930
	140			409923	409931
1000	60			409948	409956
	70			409949	409957
	80			409950	409958
	90			409951	409959
	100			409952	409960
	110			409953	409961
	120			409954	409962
	140			409955	409963

Note: Items are without seal and connecting material.

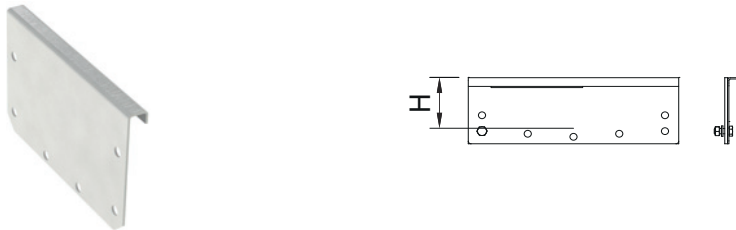
Centre outlet



Dimensions		Gully	Outlet diameter ØD [mm]	Item number	
L [mm]	H [mm]			1.4301	1.4404
1270	60	ACO hygienic gully 218	200	414243	414251
	70			414244	414252
	80			414245	414253
	90			414246	414254
	100			414247	414255
	110			414248	414256
	120			414249	414257
	140			414250	414258

Note: Items are without seal and connecting material.

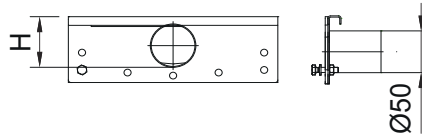
End plate



Dimensions [mm]	Item number	
	1.4301	1.4404
55	402001	402002
60	402003	402004
70	402005	402006
80	402034	402035
90	402007	402008
100	402024	402025
110	402020	402021
120	402022	402023
140	401999	402000

Note: Items are equipped with seal and connecting material.

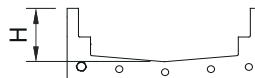
End plate with 50 mm outlet



Dimensions H [mm]	Item number	
	1.4301	1.4404
55	402001	402002
60	402003	402004
70	402005	402006
80	402034	402035
90	402007	402008
100	402024	402025
110	402020	402021
120	402022	402023
140	401999	402000

Note: Items are equipped with seal and connecting material.

Seal rubber



Dimensions H [mm]	Item number
	NBR
60	413593
70	413594
80	413595
90	413596
100	413597
110	413598
120	413599
140	413600

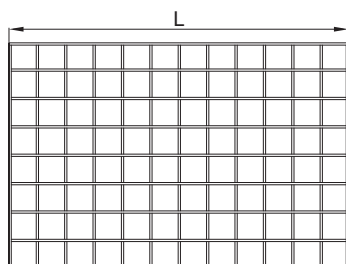
Note: Items include seal and connecting material.

Gratings for ACO modular box channel 200

Product information

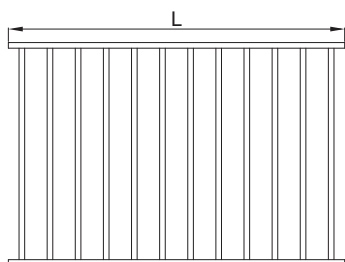
- Fully tested and classified to EN 1433
- Available in 1.4301 (304) or 1.4404 (316L) grades of stainless steel
- Special length 300 mm for branches and corner units
- Slip resistant gratings available for added user safety
- Load class A 15

ACO mesh grating



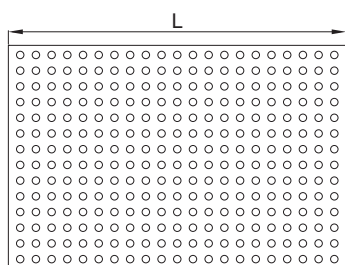
Length L [mm]	Load class	Slip resistant	Material	Item number
300	A 15	No	1.4301	414141
			1.4404	414191
		Yes	1.4301	414140
			1.4404	414190
500	A 15	No	1.4301	92207
			1.4404	92257
		Yes	1.4301	92200
			1.4404	92250
1000	A 15	No	1.4301	92208
			1.4404	92258
		Yes	1.4301	92201
			1.4404	92251

ACO ladder grating



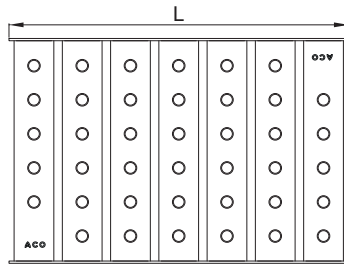
Length L [mm]	Load class	Slip resistant	Material	Item number
300	C 250	No	1.4301	414142
			1.4404	414192
500	C 250	No	1.4301	92214
			1.4404	92264
1000	C 250	No	1.4301	92215
			1.4404	92265

ACO perforated grating



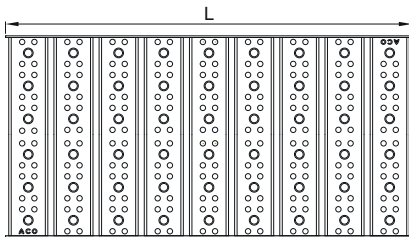
Length L [mm]	Load class	Slip resistant	Material	Item number
300	A 15	No	1.4301	414143
			1.4404	414193
500	A 15	No	1.4301	402689
			1.4404	405188
1000	A 15	No	1.4301	402688
			1.4404	405187

ACO multi-slot 5 grating



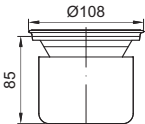
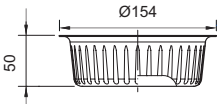
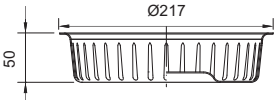
Length L [mm]	Load class	Slip resistant	Material	Item number
300	A 15	No	1.4301	414145
			1.4404	414195
500	A 15	No	1.4301	409292
			1.4404	409293
	B 125	No	1.4301	409296
			1.4404	409297
1000	A 15	No	1.4301	409288
			1.4404	409289
	B 125	No	1.4301	409240
			1.4404	409241

ACO multi-slot 8 grating



Length L [mm]	Load class	Slip resistant	Material	Item number
500	A 15	No	1.4301	415741
			1.4404	415742
	B 125	No	1.4301	415749
			1.4404	415750
1000	A 15	No	1.4301	415737
			1.4404	415738
	B 125	No	1.4301	415745
			1.4404	415746

Accessories for ACO modular box channel 200

	Description	Used with	Material	Item number
	Sieve ■ Stainless steel	■ ACO modular box channel 200 with outlet 110 mm	1.4301	97235
			1.4404	97285
	Foul air trap ■ Stainless steel ■ Water seal 50 mm	■ ACO modular box channel 200 with outlet 110 mm	1.4301	97217
			1.4404	97267
	Silt basket ■ Stainless steel ■ 0,6 litre capacity	■ ACO modular box channel 200 with outlet 142 mm	1.4301	408202
			1.4404	408212
	Silt basket ■ Stainless steel ■ 1,4 litre capacity	■ ACO modular box channel 200 with outlet 200 mm	1.4301	408222
			1.4404	408232

ACO modular slot channel 20 - standard articles

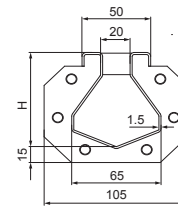
Product information

Ideal for wash-down applications or as a water break between designed wet and dry areas.

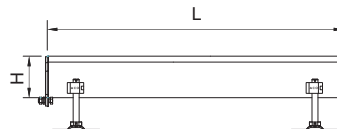
Modular concept allows specification of standard channel units to surround machinery and fit within existing tiling patterns.

Vee-bottomed (V) profiled channel for enhanced flow efficiency at low flow rates and for improved self cleaning performance.

- Fully compliant to EN 1253
- Fully tested and classified to EN 1433
- Available in 1.4301 (304) or 1.4404 (316L) grades of stainless steel, Fully pickled and passivated
- Wide range of gratings for load class up to C 250 (EN 1433)

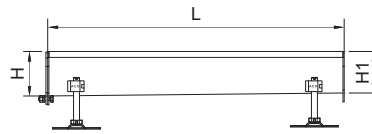


Level invert channel



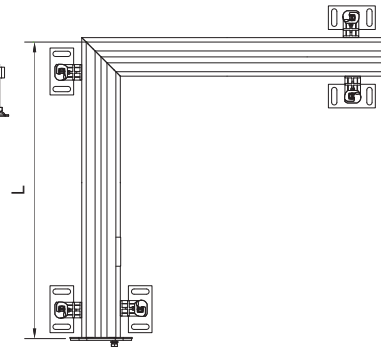
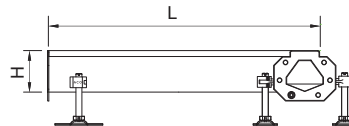
Dimensions		Item number	
L [mm]	H [mm]	1.4301	1.4404
500	70	92300	92350
	90	92301	92351
	120	92302	92352
1000	70	92305	92355
	90	92306	92356
	120	92307	92357
2000	70	92310	92360
	90	92311	92361
	120	92312	92362
3000	70	92316	92366
	90	92317	92367
	120	92318	92368

Note: Items are equipped with seal and connecting material on one site.

Sloping invert channel


L [mm]	Dimensions		Item number	
	H1 [mm]	H2 [mm]	1.4301	1.4404
500	70	75	92303	92353
	75	80	92304	92354
1000	70	75	92308	92358
	75	80	92309	92359
2000	70	80	92313	92363
	80	90	92314	92364
	90	100	92315	92365
3000	70	80	92319	92369
	80	90	92320	92370
	90	100	92321	92371
	100	110	92322	92372
	110	120	92323	92373
6000	70	90	409014	409015
	90	110	409016	409017

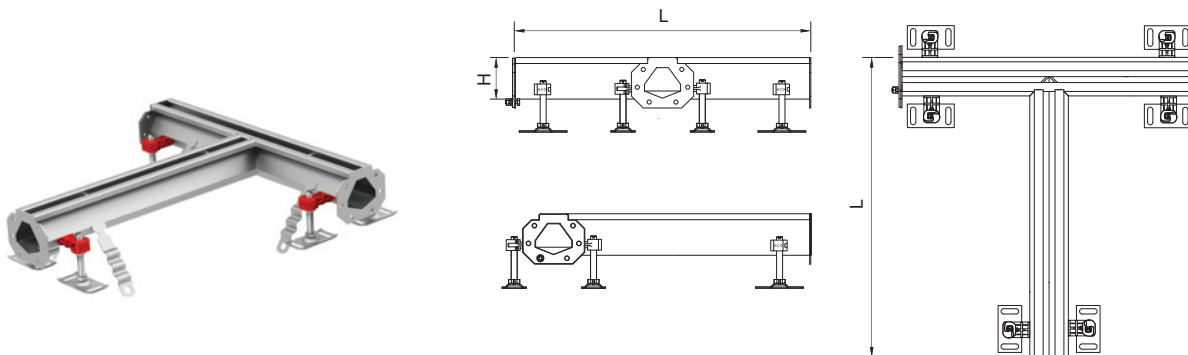
Note: Items are equipped with seal and connecting material on deeper site.

Corner unit


L [mm]	Dimensions		Item number	
	H [mm]		1.4301	1.4404
500	70		92338	92388
	75		92339	92389
	80		92340	92390
	90		92341	92391
	100		92342	92392
	110		92343	92393
	120		92344	92394

Note: Items are equipped with seal and connecting material on one site.

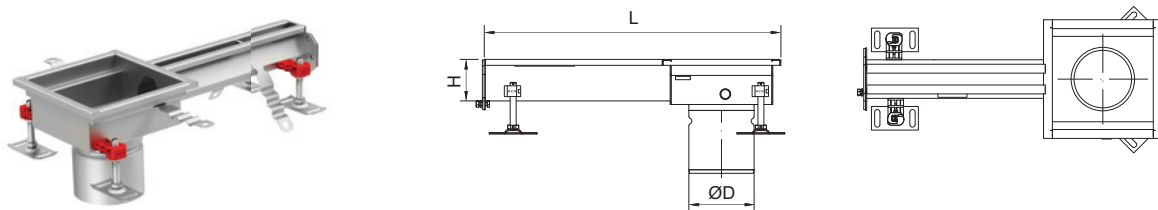
Branch unit



Dimensions		Item number	
L [mm]	H [mm]	1.4301	1.4404
500	70	92345	92395
	75	92346	92396
	80	92347	92397
	90	92348	92398
	100	92349	92399
	110	92400	92450
	120	92401	92451

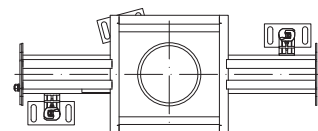
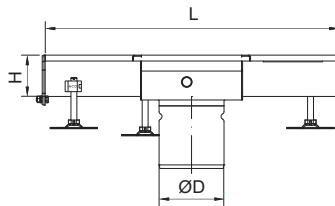
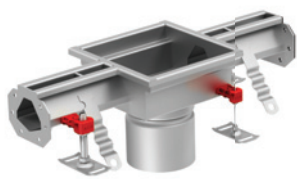
Note: Items are equipped with seal and connecting material on one site.

End outlet



Dimensions		Gully	Gully top [mm]	Outlet diameter ØD [mm]	Item number	
L [mm]	H [mm]				1.4301	1.4404
500	70	ACO gully EG150	200 x 200	110	414341	414348
	75				414342	414349
	80				414343	414350
	90				414344	414351
	100				414345	414352
	110				414346	414353
	120				414347	414354
	70	ACO hygienic gully 142	200 x 200	125	415925	415970
	75				415925	415971
	80				415927	415972
	90				415928	415973
	100				415929	415974
	110				415930	415975
	120				415931	415976
	70	ACO hygienic gully 157	250 x 250	142	414201	414208
	75				414202	414209
	80				414203	414210
	90				414204	414211
	100				414205	414212
	110				414206	414213
	120				414207	414214

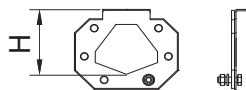
Note: Items are without seal and connecting material.

Centre outlet


Dimensions		Gully	Gully top [mm]	Outlet diameter ØD [mm]	Item number	
L [mm]	H [mm]				1.4301	1.4404
500	70	ACO gully EG150	200 x 200	110	414355	414362
	75				414356	414363
	80				414357	414364
	90				414358	414365
	100				414359	414366
	110				414360	414367
	120				414361	414368
1000	70				414369	414376
	75				414370	414377
	80				414371	414378
	90				414372	414379
	100				414373	414380
	110				414374	414381
	120				414375	414382
500	70	ACO hygienic gully 142	200 x 200	125	415932	415977
	75				415933	415978
	80				415934	415979
	90				415935	415980
	100				415936	415981
	110				415937	415982
	120				415938	415983
1000	70				415939	415984
	75				415940	415985
	80				415941	415986
	90				415942	415987
	100				415943	415988
	110				415944	415989
	120				415945	415990
500	70	ACO hygienic gully 157	250 x 250	142	414215	414222
	75				414216	414223
	80				414217	414224
	90				414218	414225
	100				414219	414226
	110				414220	414227
	120				414221	414228
1000	70				414229	414236
	75				414230	414237
	80				414231	414238
	90				414232	414239
	100				414233	414240
	110				414234	414241
	120				414235	414242

Note: Items are without seal and connecting material.

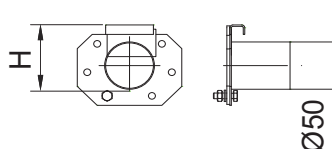
End plate



Dimensions H [mm]	Item number	
	1.4301	1.4404
70	92324	92374
75	92325	92375
80	92326	92376
90	92327	92377
100	92328	92378
110	92329	92379
120	92330	92380

Note: Items are equipped with seal and connecting material.

End plate with 50 mm outlet



Dimensions H [mm]	Item number	
	1.4301	1.4404
70	92331	92381
75	92332	92382
80	92333	92383
90	92334	92384
100	92335	92385
110	92336	92386
120	92337	92387

Note: Items are equipped with seal and connecting material.

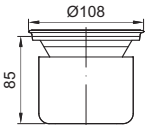
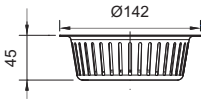
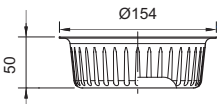
Seal rubber



Dimensions H [mm]	Item number
	NBR
70	400510
75	400511
80	400512
90	400513
100	400514
110	400515
120	400516

Note: Items include seal and connecting material.

Accessories for ACO modular slot channel 20

	Description	Used with	Material	Item number
	Sieve ■ Stainless steel	■ ACO modular slot channel 20 with outlet 110 mm	1.4301	97235
			1.4404	97285
	Foul air trap ■ Stainless steel ■ Water seal 50 mm	■ ACO modular slot channel 20 with outlet 110 mm	1.4301	97217
			1.4404	97267
	Silt basket ■ Stainless steel ■ 0,5 litre capacity	■ ACO modular slot channel 20 with outlet 125 mm	1.4301	414739
			1.4404	414839
	Silt basket ■ Stainless steel ■ 0,6 litre capacity	■ ACO modular slot channel 20 with outlet 142 mm	1.4301	408202
			1.4404	408212

ACO modular channel - semi-standard

Product information

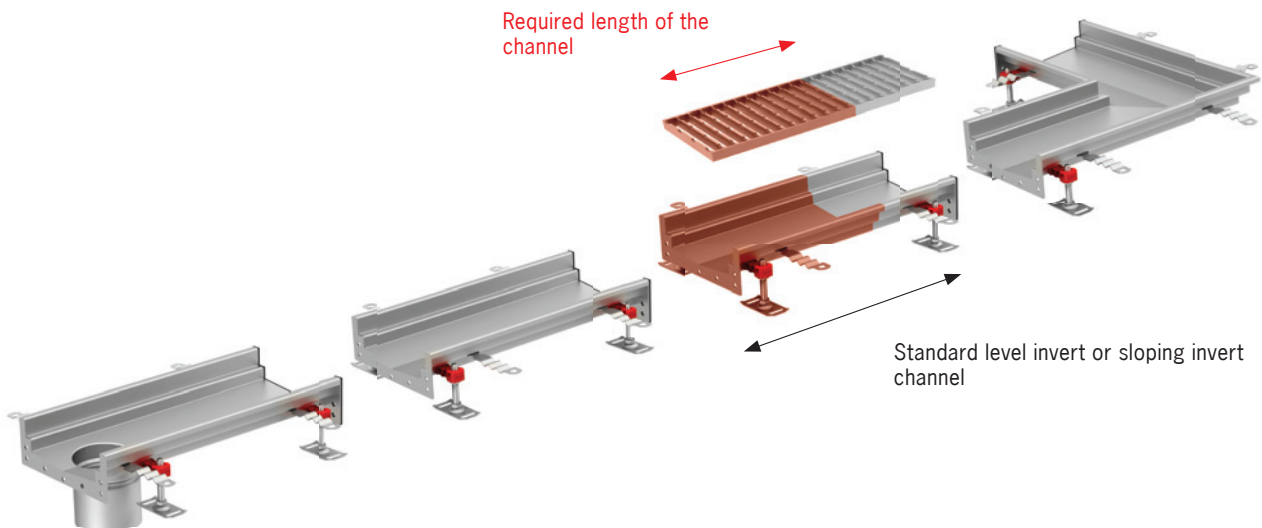
Semi-standard items offer/provide easy and fast way to get a slot or box channel of a special length to complete a linear drainage project with standard stock items. Simply specify the length you need.

How to specify semi-standard items:

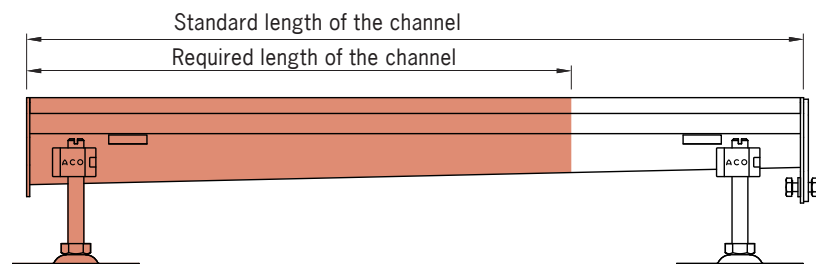
Specify the part number from which the semi-standard item will be produced.

How it works:

The semi-standard item is produced from a standard stock item (level invert and sloping invert channels only) which is shortened according to customer's need. The shortened item is then equipped with flange and sealing; to fit the following channel in the drainage project. Grating of the same length is also produced.



- Specify the required length of the item (length always starts at lower height of channel if channel with invert slope used).

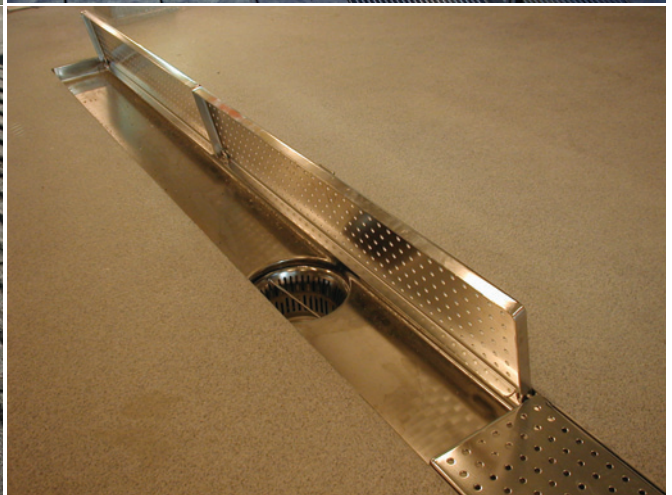


ACO design channel

Product information

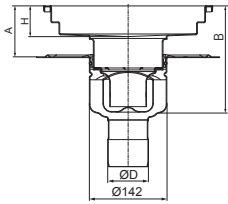
Even atypical solutions can be easily realised using stainless steel. The broad spectrum of finishes and shapes gives complete design freedom.

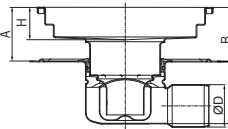
Customers' individual channel designs will be managed by our expert team with tailor-made services for specific projects with full proposal information, CAD layout drawings and assembly instructions. Contact our Sales/Technical department team and we will help you with your project.



Flow rates and Construction heights

ACO channel, ACO hygienic gully 142

			
Outlet diameter	Outlet position	Flow rate [l/s]	
ØD	Vertical	H = 60 mm	
		A min. = 85	A max. = 115
		B min. = 194	B max. = 224
75	Vertical	1.4	1.7
110		1.6	1.9

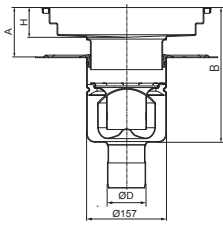
			
Outlet diameter	Outlet position	Flow rate [l/s]	
ØD	Horizontal	H = 60 mm	
		A min. = 75	A max. = 115
		B min. = 185	B max. = 245
75	Horizontal	1.4	1.7
110		1.6	1.9

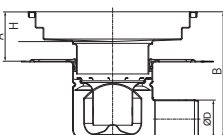
Notes:

A min. and B min. values can be reduced by 15 mm if earth screw is removed and channel outlet spigot shortened. Please be aware that channel outlet pipe shortening affects the A max. and B max. values.

Flow rates measured according to EN 1253. Flow rate performance without silt basket (flow rates with empty silt basket are approximately 15% lower than the values stated)

ACO channel, ACO hygienic gully 157

			
Outlet diameter	Outlet position	Flow rate [l/s]	
ØD		H = 60 mm	
		A min. = 85	A max. = 115
		B min. = 232	B max. = 262
75	Vertical	2.9	3.1
110		3.9	4.2

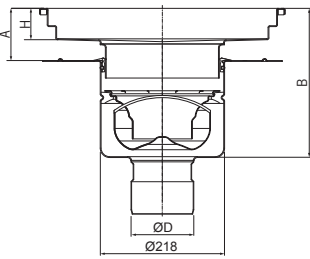
			
Outlet diameter	Outlet position	Flow rate [l/s]	
ØD		H = 60 mm	
		A min. = 75	A max. = 115
		B min. = 242	B max. = 285
75	Horizontal	2.8	3.1
110		3.2	3.9

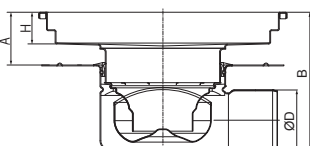
Notes:

A min. and B min. values can be reduced by 15 mm if earth screw is removed and channel outlet spigot shortened. Please be aware that channel outlet pipe shortening affects the A max. and B max. values.

Flow rates measured according to EN 1253. Flow rate performance without silt basket (flow rates with empty silt basket are approximately 15% lower than the values stated)

ACO channel, ACO hygienic gully 218

											
Outlet diameter	Outlet position	Flow rate [l/s]									
ØD		H = 60 mm		H = 80 mm		H = 100 mm		H = 150 mm		H = 200 mm	
		A min. = 75 [mm]	A max. = 115 [mm]	A min. = 95 [mm]	A max. = 135 [mm]	A min. = 115 [mm]	A max. = 155 [mm]	A min. = 165 [mm]	A max. = 205 [mm]	A min. = 215 [mm]	A max. = 255 [mm]
		B min. = 245 [mm]	B max. = 285 [mm]	B min. = 265 [mm]	B max. = 305 [mm]	B min. = 285 [mm]	B max. = 325 [mm]	B min. = 335 [mm]	B max. = 375 [mm]	B min. = 385 [mm]	B max. = 425 [mm]
110	Vertical	5.4	5.6	5.6	5.8	5.7	6.0	5.9	6.4	6.4	6.4
160		5.4	5.6	5.6	5.8	5.7	6.0	5.9	6.4	6.4	6.4

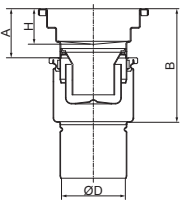
											
Outlet diameter	Outlet position	Flow rate [l/s]									
ØD		H = 60 mm		H = 80 mm		H = 100 mm		H = 150 mm		H = 200 mm	
		A min. = 85 [mm]	A max. = 115 [mm]	A min. = 105 [mm]	A max. = 135 [mm]	A min. = 125 [mm]	A max. = 155 [mm]	A min. = 175 [mm]	A max. = 205 [mm]	A min. = 225 [mm]	A max. = 255 [mm]
		B min. = 235 [mm]	B max. = 265 [mm]	B min. = 255 [mm]	B max. = 285 [mm]	B min. = 275 [mm]	B max. = 305 [mm]	B min. = 325 [mm]	B max. = 355 [mm]	B min. = 375 [mm]	B max. = 405 [mm]
110	Horizontal	4.5	4.7	4.8	4.9	4.9	5.1	5.0	5.6	5.6	6.4

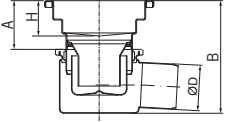
Notes:

A min. and B min. values can be reduced by 15 mm if earth screw is removed and channel outlet spigot shortened. Please be aware that channel outlet pipe shortening affects the A max. and B max. values.

Flow rates measured according to EN 1253. Flow rate performance without silt basket (flow rates with empty silt basket are approximately 15% lower than the values stated)

ACO channel, ACO gully EG150

			
Outlet diameter	Outlet position	Flow rate [l/s]	
ØD		H = 60 mm	
		A min. = 60	A max. = 85
		B min. = 165	B max. = 190
75	Vertical	1.3	1.5
110		1.3	1.5

			
Outlet diameter	Outlet position	Flow rate [l/s]	
ØD		H = 60 mm	
		A min. = 60	A max. = 85
		B min. = 165	B max. = 190
75	Horizontal	1.3	1.5

Notes:

A min. and B min. values can be reduced by 15 mm if earth screw is removed and channel outlet spigot shortened. Please be aware that channel outlet pipe shortening affects the A max. and B max. values.

Flow rates measured according to EN 1253. Flow rate performance without silt basket (flow rates with empty silt basket are approximately 15% lower than the values stated)





ACO pipe

		Page
ACO pipe	Introduction	Introduction 154
		System overview 155
	Straight pipes	ACO pipe - straight pipes 156
		ACO pipe - double socketed pipes 160
	Bends	ACO pipe - bends 163
	Branches	ACO pipe - single branches 167
		ACO pipe - double branches 168
		ACO pipe - single branch reductions 170
		ACO pipe - double branch reductions 171
		ACO pipe - swept single branch 172
	Accessories	Accessories 173
	Flow rates	Full bore flow rate tables for varying gradients 191
		Full bore flow rate table for level or nearly level gradients 193
	Operating pressures	Operating pressures 194

Introduction

ACO pipe is the ideal system for gray and black water, rainwater and industrial waste water drainage applications. When used with ACO gully and ACO channel systems, ACO pipe provides a unique, complex building drainage solution.

ACO pipe and fittings are available in 50 mm, 75 mm, 110 mm, 125 mm, 160 mm, 200 mm and 250 mm external diameters with the standard lengths from 0.15 meter up to 6 meter for optimum practicality and ease of assembly.

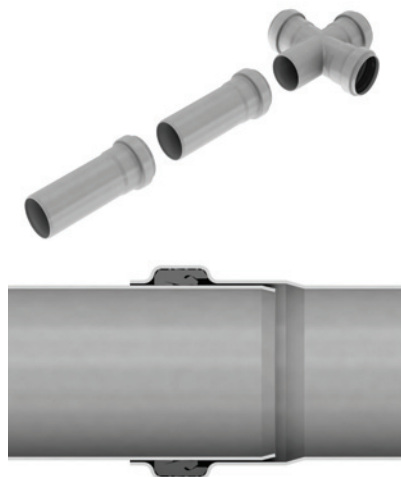
ACO pipe push-fit connection

Reliable for vacuum and gravity piping systems.

ACO pipe double lip seal delivers the ultimate system reliability. The unique and sophisticated design of lips and cavities provide tight connections.

Push-fit advantages

- Easy to assemble
- Time saving
- Cost saving
- Tight connection



System overview

Straight pipes



Bends



Branches



Accessories

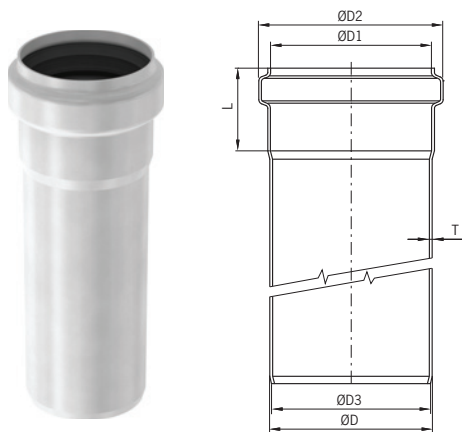


Straight pipes

Product information

- Pipes are available in 50 mm, 75 mm, 110 mm, 125 mm, 160 mm, 200 mm and 250 mm external diameters
- Lengths from 0.15 meter up to 6 meter
- Available in 1.4301 (AISI 304) and 1.4404 (AISI 316L) grades stainless steel
- Push-fit system for quick assembly
- Superior seal security – components comprise a unique double lip sealing system, ideal for extraneous conditions
- Fully comply to EN 1124
- EPDM and Viton® seals available
- Fully pickled and passivated

ACO pipe - straight pipe



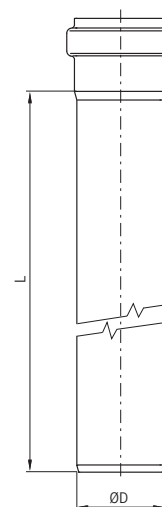
ACO pipe - double socketed pipe



Dimensions of socket and spigot				Socket length L [mm]	Wall thickness T [mm]
ØD [mm]	ØD ₁ [mm]	ØD ₂ [mm]	ØD ₃ [mm]		
50	51	62.0	47	42	1
75	76	87.5	72	50	1
110	111	125.5	107	57	1
125	126	141.0	122	63	1
160	161	178.0	156	70	1.25
200	201	219.0	195	80	1.5
250	251	268.6	245	90	1.5

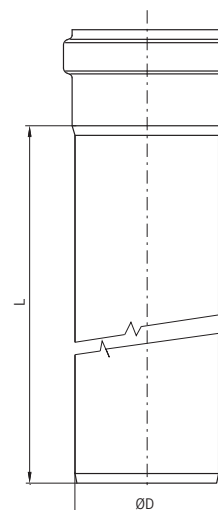
ACO pipe - straight pipe 50 mm

Seal material	Outlet diameter ØD [mm]	Active length L [mm]	Weight [kg]	Item number 1.4301	Item number 1.4404
EPDM	50	150	0.2	98500	98550
	50	250	0.4	98502	98552
	50	500	0.7	98504	98554
	50	750	1.0	98506	98556
	50	1000	1.3	98508	98558
	50	1500	1.9	98510	98560
	50	2000	2.6	98512	98562
	50	2500	3.2	419274	419282
	50	3000	3.8	98514	98564
	50	4000	5.0	419458	419482
	50	5000	6.3	419466	419490
Viton	50	6000	7.5	419474	419498
	50	150	0.2	98501	98551
	50	250	0.4	98503	98553
	50	500	0.7	98505	98555
	50	750	1.0	98507	98557
	50	1000	1.3	98509	98559
	50	1500	1.9	98511	98561
	50	2000	2.6	98513	98563
	50	2500	3.2	419275	419283
	50	3000	3.8	98515	98565
	50	4000	5.0	419459	419483
	50	5000	6.3	419467	419491
	50	6000	7.5	419475	419499



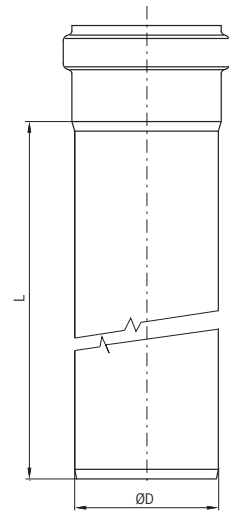
ACO pipe - straight pipe 75 mm

Seal material	Outlet diameter ØD [mm]	Active length L [mm]	Weight [kg]	Item number 1.4301	Item number 1.4404
EPDM	75	150	0.4	98516	98566
	75	250	0.6	98518	98568
	75	500	1.0	98520	98570
	75	750	1.5	98522	98572
	75	1000	2.0	98524	98574
	75	1500	2.9	98526	98576
	75	2000	3.6	98528	98578
	75	2500	4.8	419276	419284
	75	3000	5.7	98530	98580
	75	4000	7.6	419460	419484
	75	5000	9.4	419468	419492
Viton	75	6000	11.3	419476	419500
	75	150	0.4	98517	98567
	75	250	0.6	98519	98569
	75	500	1.0	98521	98571
	75	750	1.5	98523	98573
	75	1000	2.0	98525	98575
	75	1500	2.9	98527	98577
	75	2000	3.6	98529	98579
	75	2500	4.8	419277	419285
	75	3000	5.7	98531	98581
	75	4000	7.6	419461	419485
	75	5000	9.4	419469	419493
	75	6000	11.3	419477	419501



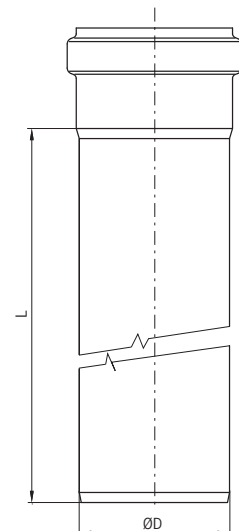
ACO pipe - straight pipe 110 mm

Seal material	Outlet diameter ØD [mm]	Active length L [mm]	Weight [kg]	Item number 1.4301	Item number 1.4404
EPDM	110	150	0.6	98532	98582
	110	250	0.9	98534	98584
	110	500	1.5	98536	98586
	110	750	2.2	98538	98588
	110	1000	2.9	98540	98590
	110	1500	4.3	98542	98592
	110	2000	5.7	98544	98594
	110	2500	7.1	419278	419286
	110	3000	8.4	98546	98596
	110	4000	11.1	419462	419486
	110	5000	13.9	419470	419494
Viton	110	6000	16.7	419478	419502
	110	150	0.6	98533	98583
	110	250	0.9	98535	98585
	110	500	1.5	98537	98587
	110	750	2.2	98539	98589
	110	1000	2.9	98541	98591
	110	1500	4.3	98543	98593
	110	2000	5.7	98545	98595
	110	2500	7.1	419279	419287
	110	3000	8.4	98547	98597
	110	4000	11.1	419463	419487
	110	5000	13.9	419471	419495
	110	6000	16.7	419479	419503



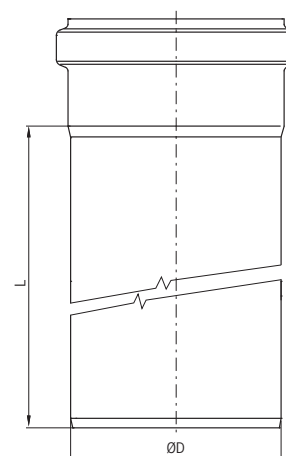
ACO pipe - straight pipe 125 mm

Seal material	Outlet diameter ØD [mm]	Active length L [mm]	Weight [kg]	Item number 1.4301	Item number 1.4404
EPDM	125	150	0.7	419692	419712
	125	250	1.0	419694	419714
	125	500	1.7	419696	419716
	125	750	2.5	419698	419718
	125	1000	3.3	419700	419720
	125	1500	4.9	419702	419722
	125	2000	6.5	419704	419724
	125	2500	8.1	419708	419728
	125	3000	9.6	419706	419726
	125	6000	19.0	419710	419730
Viton	125	150	0.7	419693	419713
	125	250	1.0	419695	419715
	125	500	1.7	419697	419717
	125	750	2.5	419699	419719
	125	1000	3.3	419701	419721
	125	1500	4.9	419703	419723
	125	2000	6.5	419705	419725
	125	2500	8.1	419707	419727
	125	3000	9.6	419709	419729
	125	6000	19.0	419711	419731



ACO pipe - straight pipe 160 mm

Seal material	Outlet diameter ØD [mm]	Active length L [mm]	Weight [kg]	Item number 1.4301	Item number 1.4404
EPDM	160	150	1.1	98548	98598
	160	250	1.6	98600	98650
	160	500	2.9	98602	98652
	160	750	4.1	98604	98654
	160	1000	5.4	98606	98656
	160	1500	7.9	98608	98658
	160	2000	10.4	98610	98660
	160	2500	12.9	419280	419288
	160	3000	15.4	98612	98662
	160	4000	20.4	419464	419488
	160	5000	25.4	419472	419496
Viton	160	6000	30.4	419480	419504
	160	150	1.1	98549	98599
	160	250	1.6	98601	98651
	160	500	2.9	98603	98653
	160	750	4.1	98605	98655
	160	1000	5.4	98607	98657
	160	1500	7.9	98609	98659
	160	2000	10.4	98611	98661
	160	2500	12.9	419281	419289
	160	3000	15.4	98613	98663
	160	4000	20.4	419465	419489
	160	5000	25.4	419473	419497
	160	6000	30.4	419481	419505



ACO pipe - straight pipe 200 mm

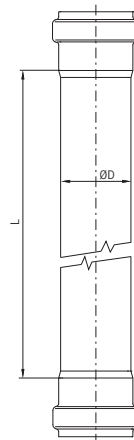
Seal material	Outlet diameter ØD [mm]	Active length L [mm]	Weight [kg]	Item number 1.4301	Item number 1.4404
EPDM	200	500	4.5	419383	419384
	200	1000	8.3	419387	419388
	200	2000	15.8	419391	419392
	200	3000	23.2	419395	419396
Viton	200	500	4.5	419385	419386
	200	1000	8.3	419389	419390
	200	2000	15.8	419393	419394
	200	3000	23.2	419397	419398

ACO pipe - straight pipe 250 mm

Seal material	Outlet diameter ØD [mm]	Active length L [mm]	Weight [kg]	Item number 1.4301	Item number 1.4404
EPDM	250	500	5.5	417071	417072
	250	1000	10.2	417075	417076
	250	2000	19.4	417079	417080
	250	3000	28.7	417083	417084
Viton	250	500	5.5	417073	417074
	250	1000	10.2	417077	417078
	250	2000	19.4	417081	417082
	250	3000	28.7	417085	417086

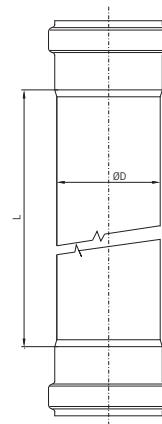
ACO pipe - double socketed pipe 50 mm

Seal material	Outlet diameter ØD [mm]	Active length L [mm]	Weight [kg]	Item number 1.4301	Item number 1.4404
EPDM	50	250	0.4	419554	419594
	50	500	0.7	419556	419596
	50	750	1.1	419558	419598
	50	1000	1.4	419560	419600
	50	1500	2.0	419562	419602
	50	2000	2.6	419564	419604
	50	3000	3.9	419566	419606
Viton	50	250	0.4	419555	419595
	50	500	0.7	419557	419597
	50	750	1.1	419559	419599
	50	1000	1.4	419561	419601
	50	1500	2.0	419563	419603
	50	2000	2.6	419565	419605
	50	3000	3.9	419567	419607



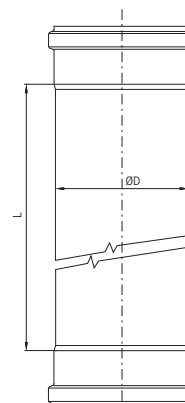
ACO pipe - double socketed pipe 75 mm

Seal material	Outlet diameter ØD [mm]	Active length L [mm]	Weight [kg]	Item number 1.4301	Item number 1.4404
EPDM	75	250	0.7	419568	419608
	75	500	1.2	419570	419610
	75	750	1.6	419572	419612
	75	1000	2.1	419574	419614
	75	1500	3.0	419576	419616
	75	2000	4.0	419578	419618
	75	3000	5.8	419580	419620
Viton	75	250	0.7	419569	419609
	75	500	1.2	419571	419611
	75	750	1.6	419573	419613
	75	1000	2.1	419575	419615
	75	1500	3.0	419577	419617
	75	2000	4.0	419579	419619
	75	3000	5.8	419581	419621



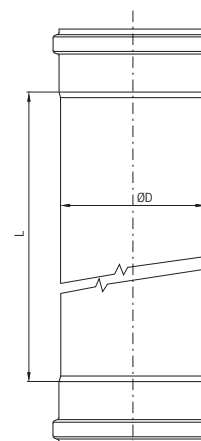
ACO pipe - double socketed pipe 110 mm

Seal material	Outlet diameter ØD [mm]	Active length L [mm]	Weight [kg]	Item number 1.4301	Item number 1.4404
EPDM	110	500	1.7	419582	419622
	110	750	2.4	419584	419624
	110	1000	3.0	419586	419626
	110	1500	4.4	419588	419628
	110	2000	5.7	419590	419630
	110	3000	8.4	419592	419632
Viton	110	500	1.7	419583	419623
	110	750	2.4	419585	419625
	110	1000	3.0	419587	419627
	110	1500	4.4	419589	419629
	110	2000	5.7	419591	419631
	110	3000	8.4	419593	419633



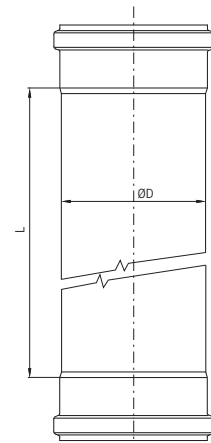
ACO pipe - double socketed pipe 125 mm

Seal material	Outlet diameter ØD [mm]	Active length L [mm]	Weight [kg]	Item number 1.4301	Item number 1.4404
EPDM	125	500	1.7	419787	419799
	125	750	2.5	419789	419801
	125	1000	3.3	419791	419803
	125	1500	4.9	419793	419805
	125	2000	6.5	419795	419807
	125	3000	9.6	419797	419809
Viton	125	500	1.7	419788	419800
	125	750	2.5	419790	419802
	125	1000	3.3	419792	419804
	125	1500	4.9	419794	419806
	125	2000	6.5	419796	419808
	125	3000	9.6	419798	419810



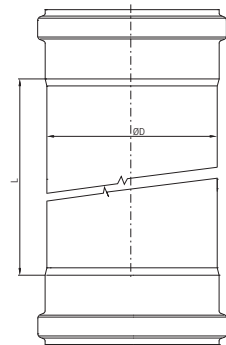
ACO pipe - double socketed pipe 160 mm

Seal material	Outlet diameter ØD [mm]	Active length L [mm]	Weight [kg]	Item number 1.4301	Item number 1.4404
EPDM	160	500	3.3	419634	419646
	160	750	4.5	419636	419648
	160	1000	5.8	419638	419650
	160	1500	8.2	419640	419652
	160	2000	10.7	419642	419654
	160	3000	15.7	419644	419656
Viton	160	500	3.3	419635	419647
	160	750	4.5	419637	419649
	160	1000	5.8	419639	419651
	160	1500	8.2	419641	419653
	160	2000	10.7	419643	419655
	160	3000	15.7	419645	419657



ACO pipe - double socketed pipe 200 mm

Seal material	Outlet diameter ØD [mm]	Active length L [mm]	Weight [kg]	Item number 1.4301	Item number 1.4404
EPDM	200	500	5.0	419658	419659
	200	1000	8.6	419662	419663
	200	2000	15.9	419666	419667
	200	3000	23.1	419670	419671
Viton	200	500	5.0	419660	419661
	200	1000	8.6	419664	419665
	200	2000	15.9	419668	419669
	200	3000	23.1	419672	419673

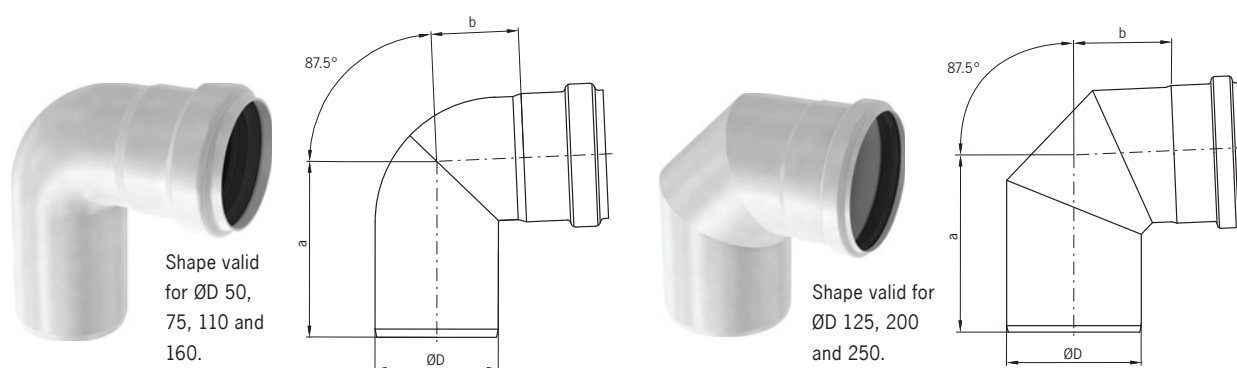


Bends

Product information

- Bends are available in 50 mm, 75 mm, 110 mm, 125 mm, 160 mm, 200 mm and 250 mm external diameters
- Available in 1.4301 (AISI 304) and 1.4404 (AISI 316L) grades stainless steel
- Push-fit system for quick assembly
- Superior seal security – components comprise a unique double lip sealing system, ideal for extraneous conditions
- Fully chemically pickled and passivated
- EPDM and Viton® seals available
- Fully comply to EN 1124

ACO pipe - bend 87.5°

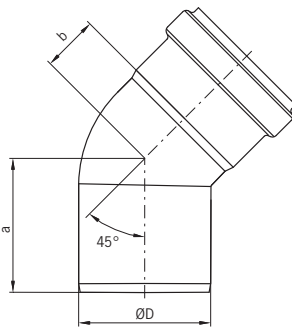


Seal material	Outlet diameter ØD [mm]	Dimensions		Weight [kg]	Item number	Item number
		a [mm]	b [mm]		1.4301	1.4404
EPDM	50	86	40	0.2	98700	98750
	75	107	53	0.4	98702	98752
	110	134	67	0.7	98704	98754
	125	161	93	0.8	419732	419734
	160	181	105	1.7	98706	98756
	200	215	129	3.9	419411	419413
	250	297	198	5.1	417087	417088
Viton	50	86	40	0.2	98701	98751
	75	107	53	0.4	98703	98753
	110	134	67	0.7	98705	98755
	125	161	93	0.8	419733	419735
	160	181	105	1.7	98707	98757
	200	215	129	3.9	419412	419414
	250	297	198	5.1	417089	417090

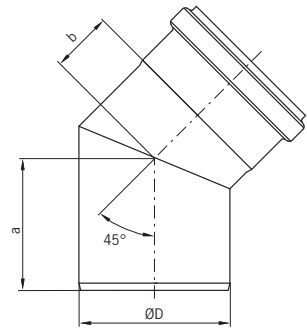
ACO pipe - bend 45°



Shape valid
for ØD 50, 75,
110 and 160.

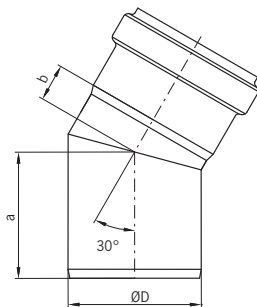


Shape valid for
ØD 125, 200
and 250.



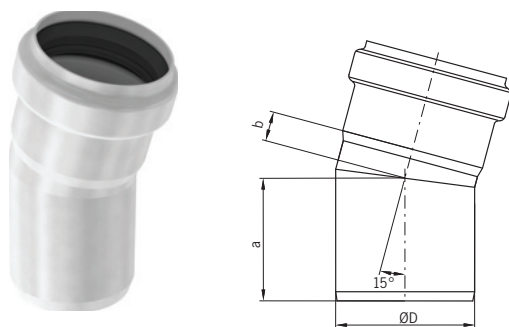
Seal material	Outlet diameter ØD [mm]	Dimensions		Weight [kg]	Item number 1.4301	Item number 1.4404
		a [mm]	b [mm]			
EPDM	50	62	24	0.2	98708	98758
	75	76	32	0.3	98710	98760
	110	93	42	0.5	98712	98762
	125	110	50	0.6	419736	419738
	160	131	55	1.3	98714	98764
	200	152	60	2.7	419407	419409
	250	177	76	4.1	417091	417092
Viton	50	62	24	0.2	98709	98759
	75	76	32	0.3	98711	98761
	110	93	42	0.5	98713	98763
	125	110	50	0.6	419737	419739
	160	131	55	1.3	98715	98765
	200	152	60	2.7	419408	419410
	250	177	76	4.1	417093	417094

ACO pipe - bend 30°



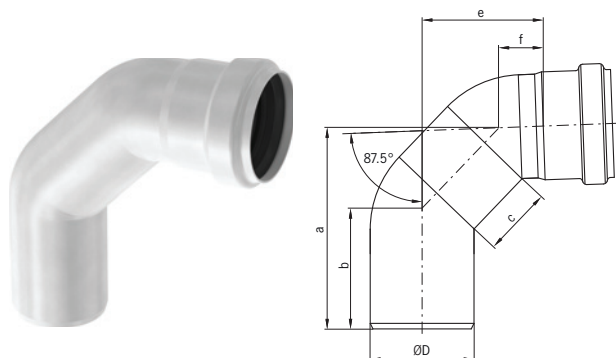
Seal material	Outlet diameter ØD [mm]	Dimensions		Weight [kg]	Item number 1.4301	Item number 1.4404
		a [mm]	b [mm]			
EPDM	50	57	16	0.2	98716	98766
	75	71	21	0.3	98718	98768
	110	85	27	0.5	98720	98770
	125	98	28	0.6	419740	419742
	160	110	40	1.2	98722	98772
	200	137	45	2.3	419403	419405
	250	153	58	2.9	417095	417096
Viton	50	57	16	0.2	98717	98767
	75	71	21	0.3	98719	98769
	110	85	27	0.5	98721	98771
	125	98	28	0.6	419741	419743
	160	110	40	1.2	98723	98773
	200	137	45	2.3	419404	419406
	250	153	58	2.9	417097	417098

ACO pipe - bend 15°



Seal material	Outlet diameter ØD [mm]	Dimensions		Weight [kg]	Item number	Item number
		a [mm]	b [mm]		1.4301	1.4404
EPDM	50	54	12	0.1	98724	98774
	75	66	16	0.3	98726	98776
	110	78	15	0.4	98728	98778
	125	84	19	0.5	419744	419746
	160	99	29	1.0	98730	98780
	200	123	31	1.9	419399	419401
	250	136	40	2.5	417099	417100
Viton	50	54	12	0.1	98725	98775
	75	66	16	0.3	98727	98777
	110	78	15	0.4	98729	98779
	125	84	19	0.5	419745	419747
	160	99	29	1.0	98731	98781
	200	123	31	1.9	419400	419402
	250	136	40	2.5	417101	417102

ACO pipe - long bend 87.5°



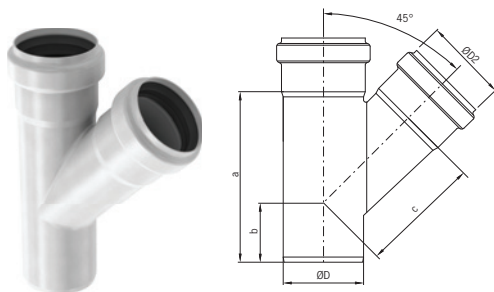
Seal material	Outlet diameter ØD [mm]	Dimensions					Weight [kg]	Item number	Item number
		a [mm]	b [mm]	c [mm]	e [mm]	f [mm]		1.4301	1.4404
EPDM	50	123	71	50	75	25	0.3	419146	419000
	75	146	87	50	88	32	0.5	419148	419002
	110	175	103	250	103	39	1.4	419150	419004
	160	222	126	250	183	92	2.2	419152	419144
Viton	50	123	71	50	75	25	0.3	419147	419001
	75	146	87	50	88	32	0.5	419149	419003
	110	175	103	250	103	39	1.4	419151	419005
	160	222	126	250	183	92	2.2	419153	419145

Branches

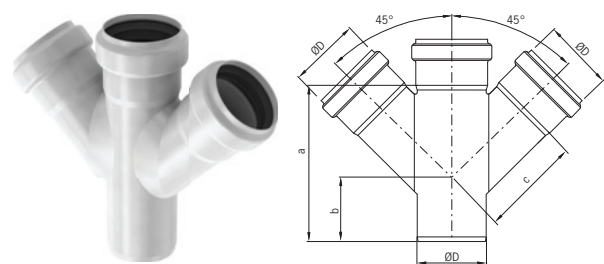
Product information

- Branches are available in 50 mm, 75 mm, 110 mm, 125 mm, 160 mm, 200 mm and 250 mm external diameters
- Available in 1.4301 (AISI 304) and 1.4404 (AISI 316L) grades stainless steel
- Push-fit system for quick assembly
- Superior seal security – components comprise a unique double lip sealing system, ideal for extraneous conditions
- Fully comply to EN 1124
- EPDM and Viton® seals available
- Fully pickled and passivated

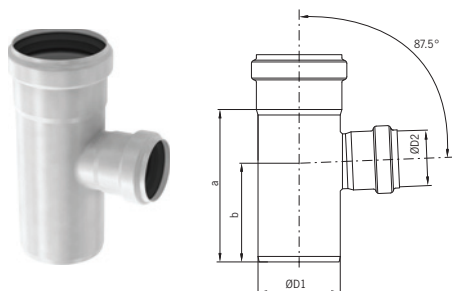
ACO pipe - single branch



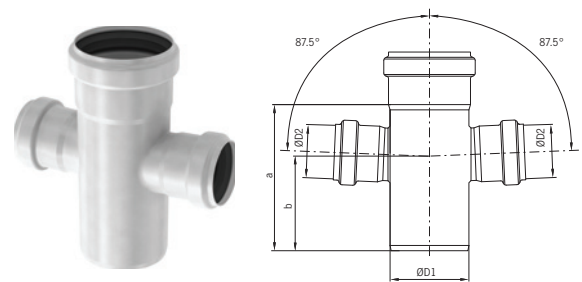
ACO pipe - double branch



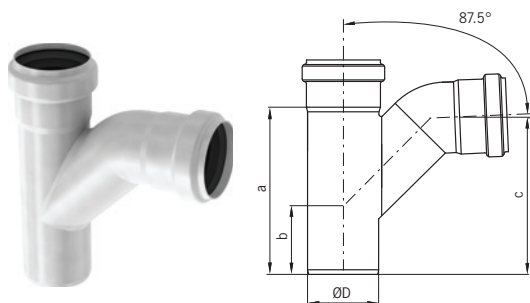
ACO pipe - single branch reduction



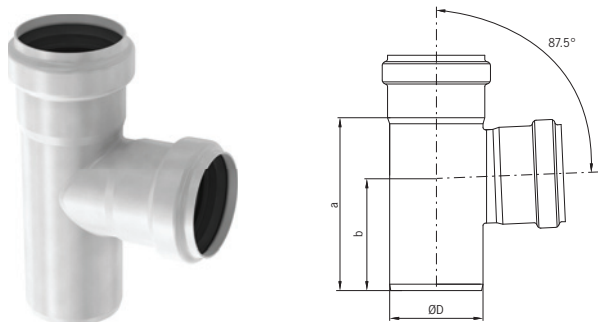
ACO pipe - double branch reduction



ACO pipe - swept single branch

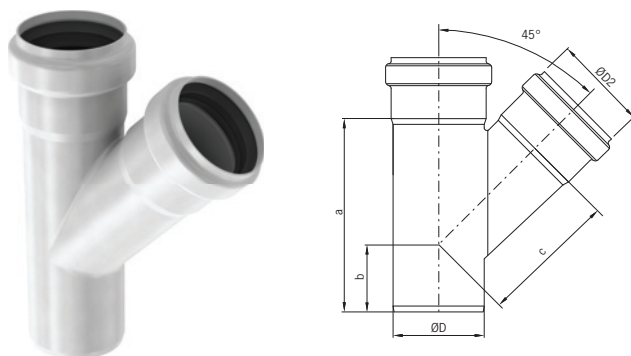


ACO pipe - single branch 87.5°



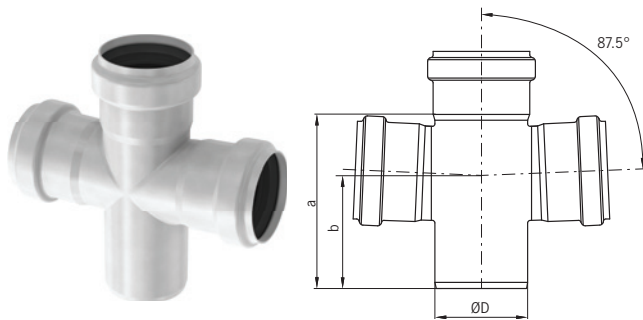
Seal material	Outlet diameter ØD [mm]	Dimensions		Weight [kg]	Item number	Item number
		a [mm]	b [mm]		1.4301	1.4404
EPDM	50	106	71	0.3	98732	98782
	75	139	90	0.5	98734	98784
	110	183	117	0.8	98736	98786
	125	220	135	0.9	419748	419750
	160	288	184	2.3	98738	98788
	200	333	206	4.5	419419	419421
	250	363	215	5.5	417103	417104
Viton	50	106	71	0.3	98733	98783
	75	139	90	0.5	98735	98785
	110	183	117	0.8	98737	98787
	125	220	135	0.9	419749	419751
	160	288	184	2.3	98739	98789
	200	333	206	4.5	419420	419422
	250	363	215	5.5	417105	417106

ACO pipe - single branch 45°



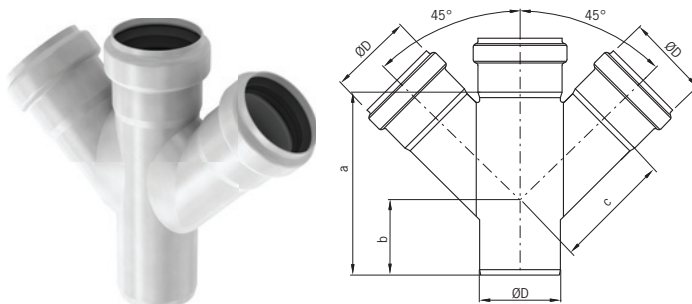
Seal material	Outlet diameter ØD [mm]	Dimensions			Weight [kg]	Item number	Item number
		a [mm]	b [mm]	c [mm]		1.4301	1.4404
EPDM	50	128	57	76	0.3	98748	98798
	75	179	74	110	0.5	98800	98850
	110	233	88	149	1.0	98802	98852
	125	273	103	170	1.1	419760	419762
	160	332	119	222	2.6	98804	98854
	200	415	151	274	5.7	419427	419429
	250	513	172	336	9.2	417107	417108
Viton	50	128	57	76	0.3	98749	98799
	75	179	74	110	0.5	98801	98851
	110	233	88	149	1.0	98803	98853
	125	273	103	170	1.1	419761	419763
	160	332	119	222	2.6	98805	98855
	200	415	151	274	5.7	419428	419430
	250	513	172	336	9.2	417109	417110

ACO pipe - double branch 87.5°



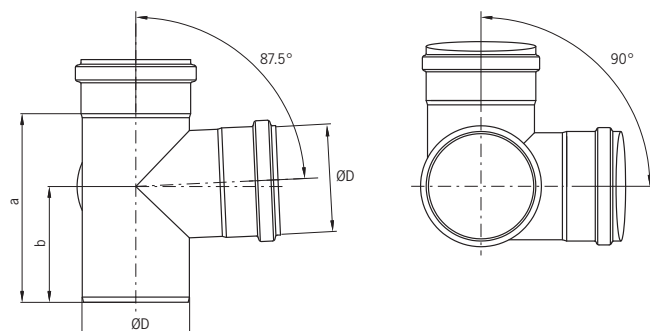
Seal material	Outlet diameter ØD [mm]	Dimensions		Weight [kg]	Item number	Item number
		a [mm]	b [mm]		1.4301	1.4404
EPDM	50	106	71	0.3	98740	98790
	75	139	90	0.6	98742	98792
	110	183	117	0.9	98744	98794
	160	288	184	2.7	98746	98796
Viton	50	106	71	0.3	98741	98791
	75	139	90	0.6	98743	98793
	110	183	117	0.9	98745	98795
	160	288	184	2.7	98747	98797

ACO pipe - double branch 45°



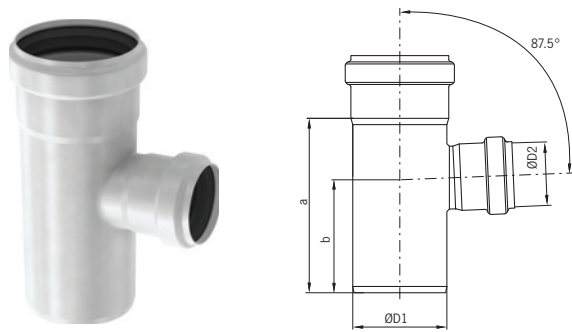
Seal material	Outlet diameter ØD [mm]	Dimensions			Weight [kg]	Item number	Item number
		a [mm]	b [mm]	c [mm]		1.4301	1.4404
EPDM	50	128	57	76	0.4	98806	98856
	75	179	74	110	0.7	98808	98858
	110	233	88	149	1.2	98810	98860
	160	332	184	222	3.5	98812	98862
	250	509	172	336	11	417119	417120
Viton	50	128	57	76	0.4	98807	98857
	75	179	74	110	0.7	98809	98859
	110	233	88	149	1.2	98811	98861
	160	332	184	222	3.5	98813	98863
	250	509	172	336	11	417121	417122

ACO pipe - corner branch 87.5°



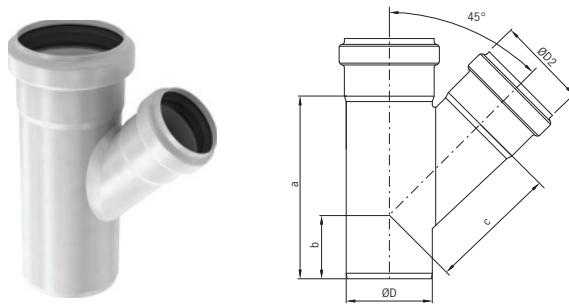
Seal material	Outlet diameter ØD [mm]	Dimensions		Weight [kg]	Item number 1.4301	Item number 1.4404
		a [mm]	b [mm]			
EPDM	50	106	71	0.4	419162	419210
	75	139	90	0.7	419164	419212
	110	183	117	1.1	419166	419214
	125	220	135	1.6	417020	417021
	160	288	184	2.9	419168	419216
Viton	50	106	71	0.4	419163	419211
	75	139	90	0.7	419165	419213
	110	183	117	1.1	419167	419215
	125	220	135	1.6	417054	417055
	160	288	184	2.9	419169	419217

ACO pipe - single branch reduction 87.5°



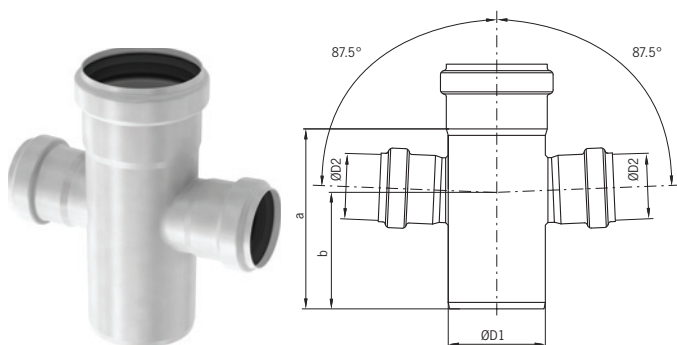
Seal material	Outlet diameter		Dimensions		Weight [kg]	Item number 1.4301	Item number 1.4404
	ØD1 [mm]	ØD2 [mm]	a [mm]	b [mm]			
EPDM	75	50	139	90	0.3	98928	98930
	110	50	183	117	0.5	98932	98934
	110	75	183	117	0.8	98936	98938
	125	75	187	110	0.9	419752	419754
	125	110	205	127	0.9	419756	419758
	160	110	288	184	2.3	400691	400693
	200	160	293	186	3.7	419415	419417
Viton	250	200	349	226	5.8	417111	417112
	75	50	139	90	0.3	98929	98931
	110	50	183	117	0.5	98933	98935
	110	75	183	117	0.8	98937	98939
	125	75	187	110	0.9	419753	419755
	125	110	205	127	0.9	419757	419759
	160	110	288	184	2.3	400692	400694
	200	160	293	186	3.7	419416	419418
	250	200	349	226	5.8	417113	417114

ACO pipe - single branch reduction 45°



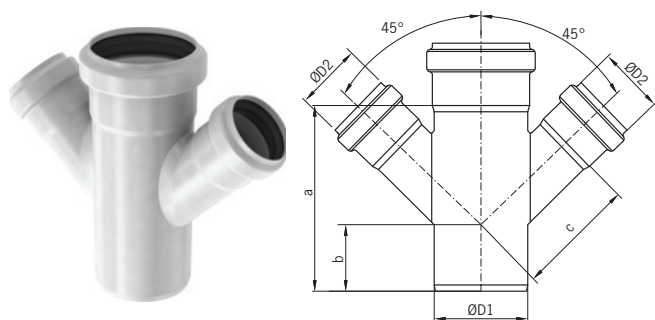
Seal material	Outlet diameter		Dimensions			Weight [kg]	Item number 1.4301	Item number 1.4404
	ØD1 [mm]	ØD2 [mm]	a [mm]	b [mm]	c [mm]			
EPDM	75	50	144	56	94	0.3	400661	400663
	110	50	147	42	119	0.5	400665	400667
	110	75	182	60	135	1.0	400669	400671
	125	75	200	65	141	1.1	419764	419766
	125	110	250	90	160	1.1	419768	419770
	160	110	332	119	191	2.6	400699	400701
	200	160	359	123	250	4.7	419423	419425
Viton	250	200	429	175	307	7.6	417115	417116
	75	50	144	56	94	0.3	400662	400664
	110	50	147	42	119	0.5	400666	400668
	110	75	182	60	135	1.0	400670	400672
	125	75	200	65	141	1.1	419765	419767
	125	110	250	90	160	1.1	419769	419771
	160	110	332	119	191	2.6	400700	400702
	200	160	359	123	250	4.7	419424	419426
	250	200	429	175	307	7.6	417117	417118

ACO pipe - double branch reduction 87.5°



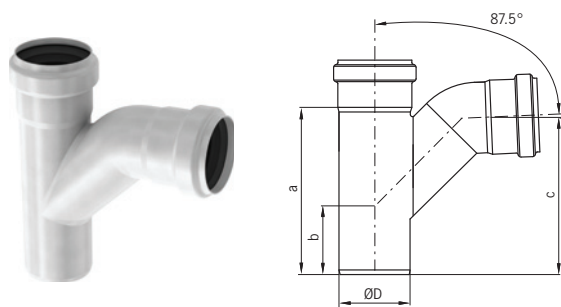
Seal material	Outlet diameter		Dimensions		Weight [kg]	Item number 1.4301	Item number 1.4404
	ØD1 [mm]	ØD2 [mm]	a [mm]	b [mm]			
EPDM	75	50	139	90	0.3	98940	98942
	110	50	183	117	0.6	98944	98946
	110	75	183	117	0.9	98900	98902
	160	110	288	184	2.7	400695	400697
Viton	75	50	139	90	0.3	98941	98943
	110	50	183	117	0.6	98945	98947
	110	75	183	117	0.9	98901	98903
	160	110	288	184	2.7	400696	400698

ACO pipe - double branch reduction 45°



Seal material	Outlet diameter		Dimensions			Weight [kg]	Item number 1.4301	Item number 1.4404
	ØD1 [mm]	ØD2 [mm]	a [mm]	b [mm]	c [mm]			
EPDM	75	50	144	56	94	0.4	400673	400675
	110	50	147	42	119	0.7	400677	400679
	110	75	182	60	135	1.2	400681	400683
	160	110	332	119	190	3.5	400703	400705
	250	200	429	150	307	10.1	417123	417124
Viton	75	50	144	56	94	0.4	400674	400676
	110	50	147	42	119	0.7	400678	400680
	110	75	182	60	135	1.2	400682	400684
	160	110	332	119	190	3.5	400704	400706
	250	200	429	150	307	10.1	417125	417126

ACO pipe - swept single branch 87.5°



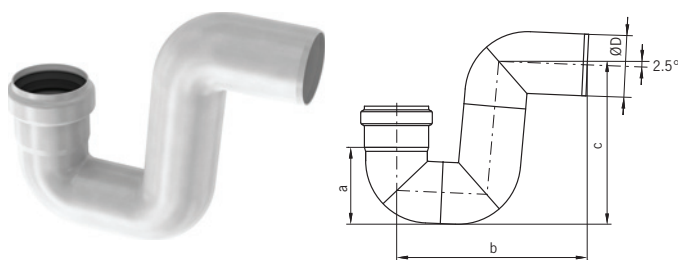
Seal material	Outlet diameter ØD [mm]	Dimensions			Weight [kg]	Item number	
		a [mm]	b [mm]	c [mm]		1.4301	1.4404
EPDM	50	128	57	117	0.3	98814	98864
	75	179	74	157	0.6	98816	98866
	110	233	88	209	1.1	98818	98868
	160	332	184	302	2.8	98820	98870
Viton	50	128	57	117	0.3	98815	98865
	75	179	74	157	0.6	98817	98867
	110	233	88	209	1.1	98819	98869
	160	332	184	302	2.8	98821	98871

Accessories

Product information

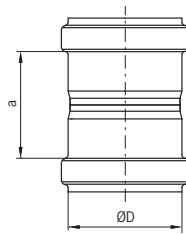
- Accessories are available in 50 mm, 75 mm, 110 mm, 125 mm, 160 mm, 200 mm and 250 mm external diameters
- Available in 1.4301 (AISI 304) and 1.4404 (AISI 316L) grades stainless steel
- Push-fit system for quick assembly
- Superior seal security – components comprise a unique double lip sealing system, ideal for extraneous conditions
- Fully comply to EN 1124
- EPDM and Viton® seals available
- Fully pickled and passivated

"P" trap



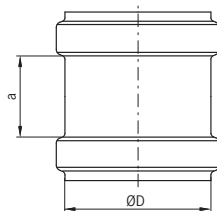
Seal material	Outlet diameter ØD [mm]	Dimensions			Weight [kg]	Item number	Item number
		a [mm]	b [mm]	c [mm]		1.4301	1.4404
EPDM	50	68	187	149	0.5	98822	98872
	75	94	232	193	0.7	98824	98874
	110	132	300	254	1.3	98826	98876
	160	190	403	347	3.3	98828	98878
Viton	50	68	187	149	0.5	98823	98873
	75	94	232	193	0.7	98825	98875
	110	132	300	254	1.3	98827	98877
	160	190	403	347	3.3	98829	98879

Straight coupling



Seal material	Outlet diameter ØD [mm]	Dimensions a [mm]	Weight [kg]	Item number 1.4301	Item number 1.4404
EPDM	50	54	0.1	98920	98970
	75	75	0.2	98922	98972
	110	84	0.4	98924	98974
	125	140	0.4	419813	419815
	160	110	0.8	98926	98976
	200	136	1.8	419431	419433
Viton	250	181	3.1	417158	417159
	50	54	0.1	98921	98971
	75	75	0.2	98923	98973
	110	84	0.4	98925	98975
	125	140	0.4	419814	419816
	160	110	0.8	98927	98977
	200	136	1.8	419432	419434
	250	181	3.1	417160	417161

Repair coupling



Seal material	Outlet diameter ØD [mm]	Dimensions a [mm]	Weight [kg]	Item number 1.4301	Item number 1.4404
EPDM	50	44	0.1	98830	98880
	75	46	0.2	98832	98882
	110	52	0.3	98834	98884
	125	70	0.3	419772	419774
	160	76	0.7	98836	98886
	200	100	1.5	419435	419437
Viton	250	182	2.4	417138	417139
	50	44	0.1	98831	98881
	75	46	0.2	98833	98883
	110	52	0.3	98835	98885
	125	70	0.3	419773	419775
	160	76	0.7	98837	98887
	200	100	1.5	419436	419438
	250	182	2.4	417140	417141

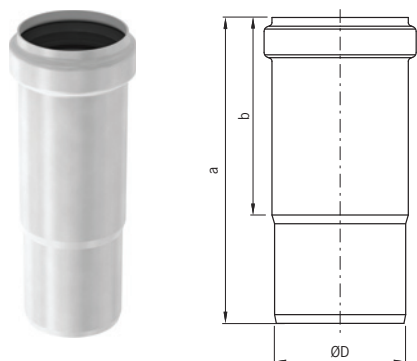
Note:

Repair couplings are used to aid a convenient repair to a damaged in-situ pipe. Unlike the standard straight coupling, there is no central registration to limit the insertion depth of the pipe. The repair coupling slides completely over a pipe joint and simply re-positioned to bridge the required pipe joint.

Installation tip:

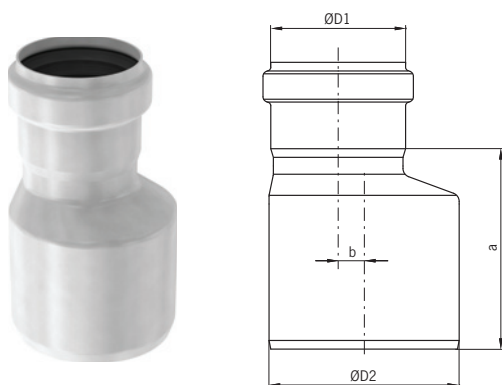
Mark the final position of the repair coupling on the installed pipe system to ensure the coupling seals are positioned symmetrically about the pipe joint.

Expansion socket



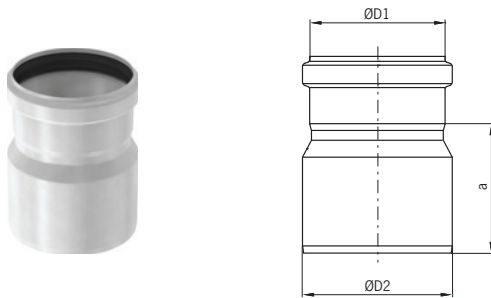
Seal material	Outlet diameter ØD [mm]	Dimensions		Weight [kg]	Item number	Item number
		a [mm]	b [mm]		1.4301	1.4404
EPDM	50	159	102	0.2	98664	98666
	75	175	113	0.3	98668	98670
	110	200	121	0.5	98672	98674
	125	250	165	0.6	419776	419778
	160	292	170	1.4	98676	98678
	250	400	190	3.8	417142	417143
Viton	50	159	102	0.2	98665	98667
	75	175	113	0.3	98669	98671
	110	200	121	0.5	98673	98675
	125	250	165	0.6	419777	419779
	160	292	170	1.4	98677	98679
	250	400	190	3.8	417144	417145

Eccentric increaser coupling



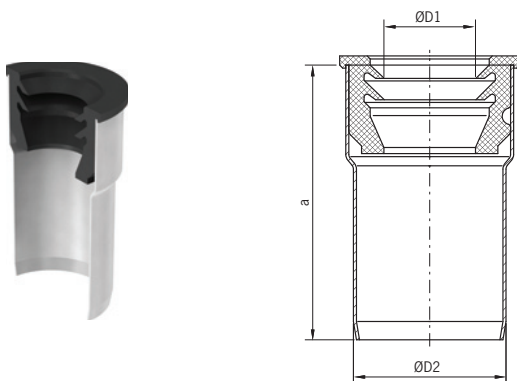
Seal material	Outlet diameter		Dimensions		Weight [kg]	Item number
	ØD1 [mm]	ØD2 [mm]	a [mm]	b [mm]		1.4404
EPDM	50	75	75	7	0.3	98892
	50	110	110	25	0.4	98978
	75	110	110	15	0.5	98894
	110	160	160	22	1.1	98896
	200	250	180	15	2.4	417135
Viton	50	75	75	7	0.3	98893
	50	110	110	25	0.4	98979
	75	110	110	15	0.5	98895
	110	160	160	22	1.1	98897
	200	250	180	15	2.4	417136

Concentric increaser coupling



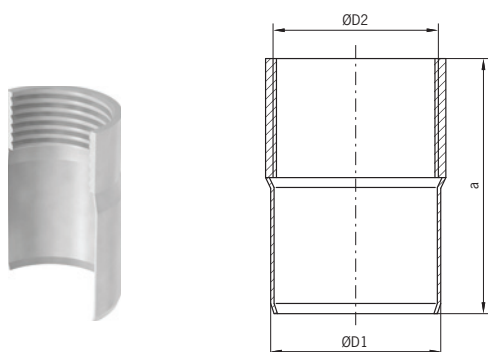
Seal material	Outlet diameter		Dimensions		Weight [kg]	Item number
	ØD1 [mm]	ØD2 [mm]	a [mm]	b [mm]		
EPDM	110	125	125	0	0.6	1.4404
	125	160	160	0	1.2	419780
	160	200	200	0	1.8	419811
	200	250	180	0	2.4	419441
Viton	110	125	125	0	0.6	417133
	125	160	160	0	1.2	419781
	160	200	200	0	1.8	419812
	200	250	180	0	2.4	419442
						417134

Increaser connector



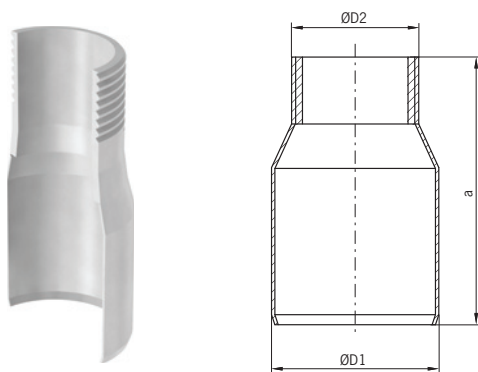
Seal material	Outlet diameter		Dimensions a [mm]	Weight [kg]	Item number
	ØD1 [mm]	ØD2 [mm]			
NBR	32	50	90	0.2	1.4404
	40	50	90	0.2	419373
					419374

Connector with internal screw thread and spigot



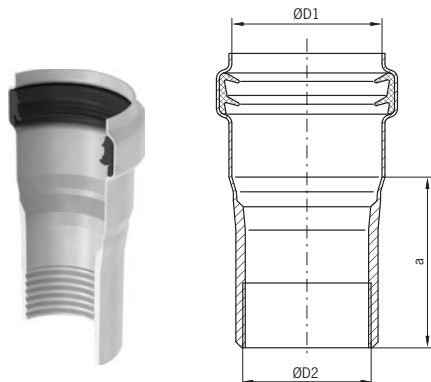
Outlet diameter		Dimensions	Weight	Item number
ØD1 [mm]	ØD2 [mm]	a [mm]	[kg]	1.4404
50	Rp 1¼"	72	0.2	98956
50	Rp 1½"	75	0.3	98957
50	Rp 2"	80	0.3	98958

Connector with external screw thread and spigot



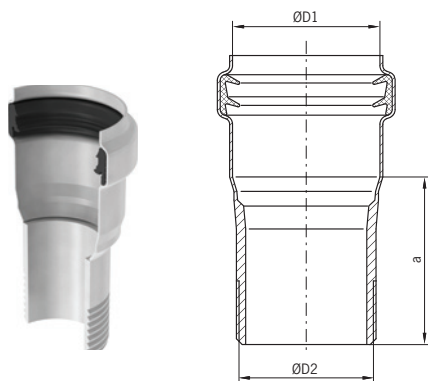
Outlet diameter		Dimensions	Weight	Item number
ØD1 [mm]	ØD2 [mm]	a [mm]	[kg]	1.4404
50	Rp 1¼"	100	0.2	419330
50	Rp 1½"	100	0.3	419331
50	Rp 2"	100	0.3	419332

Connector with socket and internal screw thread



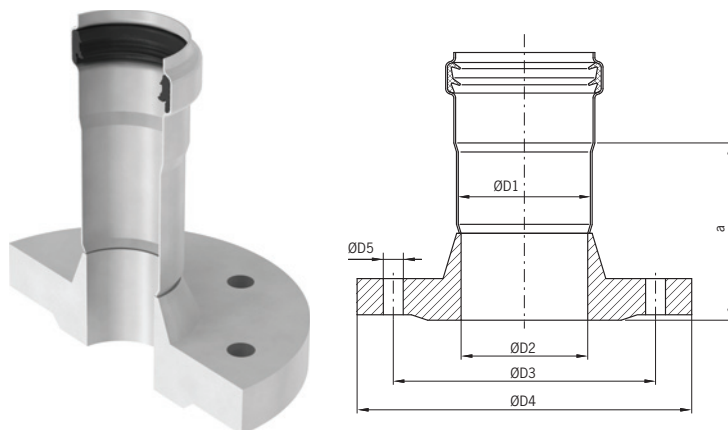
Seal material	Outlet diameter		Dimensions a [mm]	Weight [kg]	Item number 1.4404
	ØD1 [mm]	ØD2 [mm]			
EPDM	50	R 1¼"	58	0.2	419333
	50	R 1½"	58	0.3	419335
	50	R 2"	58	0.3	419337
Viton	50	R 1¼"	58	0.2	419334
	50	R 1½"	58	0.3	419336
	50	R 2"	58	0.3	419338

Connector with socket and external screw thread



Seal material	Outlet diameter		Dimensions a [mm]	Weight [kg]	Item number 1.4404
	ØD1 [mm]	ØD2 [mm]			
EPDM	50	R 1¼"	58	0.2	419250
	50	R 1½"	58	0.3	419252
	50	R 2"	58	0.3	419254
Viton	50	R 1¼"	58	0.2	419251
	50	R 1½"	58	0.3	419253
	50	R 2"	58	0.3	419255

Connector with socket and flange



Seal material	Outlet diameter				n x ØD5 [mm]	Dimensions a [mm]	Weight [kg]	Item number 1.4404
	ØD1 [mm]	ØD2 [mm]	ØD3 [mm]	ØD4 [mm]				
EPDM	50	DN 40	110	150	4 × 18	100	2.3	419256
	50	DN 50	125	165	4 × 18	100	2.7	419258
	75	DN 65	145	185	4 × 18	100	3.4	419260
	110	DN 100	180	220	8 × 18	100	4.9	419262
	200	DN 200	295	340	12 × 22	102	12.0	419514
Viton	50	DN 40	110	150	4 × 18	100	2.3	419257
	50	DN 50	125	165	4 × 18	100	2.7	419259
	75	DN 65	145	185	4 × 18	100	3.4	419261
	110	DN 100	180	220	8 × 18	100	4.9	419263
	200	DN 200	295	340	12 × 22	102	12.0	419515

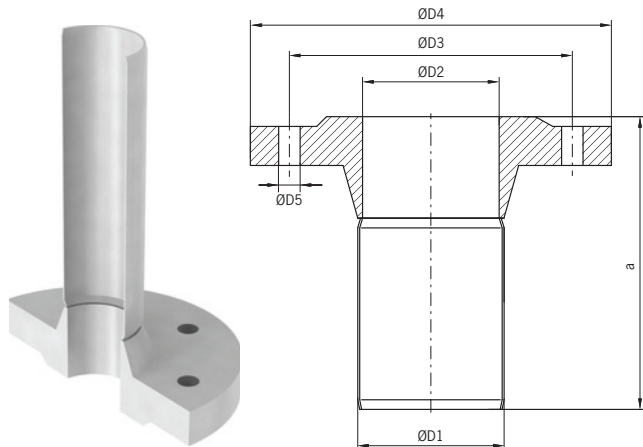
Note:

n – number of holes for screws in the flange.

Flange PN 16 DIN 2633.

Flange PN 6 and PN 10 available on request.

Connector with flange and spigot



Outlet diameter				n x ØD5 [mm]	Dimensions a [mm]	Weight [kg]	Item number
ØD1 [mm]	ØD2 [mm]	ØD3 [mm]	ØD4 [mm]				
50	DN 40	110	150	4 × 18	192	2.3	419264
50	DN 50	125	165	4 × 18	192	2.7	419265
75	DN 65	145	185	4 × 18	245	3.4	419266
110	DN 100	180	220	8 × 18	259	4.9	419267
160	DN 150	240	285	8 × 22	200	8.5	419540
200	DN 200	295	240	12 × 22	240	12.3	419541

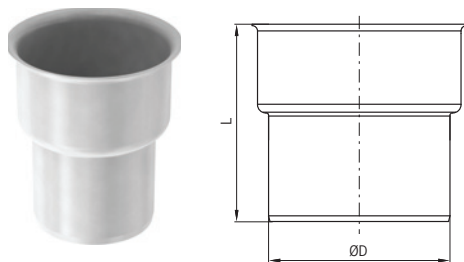
Note:

n – number of holes for screws in the flange.

Flange PN 16 DIN 2633.

Flange PN 6 and PN 10 available on request.

Connector cast iron spigot → ACO pipe socket

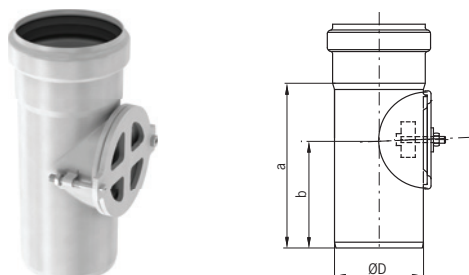


Outlet diameter ØD [mm]	Dimensions L [mm]	Weight [kg]	Item number
75	121	0.4	98904
110	137	0.6	98906

Note:

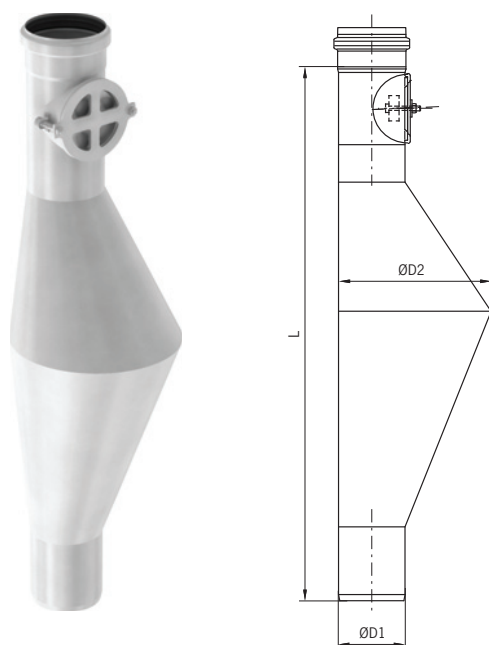
Set of reduction sealings cast Iron spigot → ACO pipe socket and ACO pipe spigot → cast iron socket

Access unit



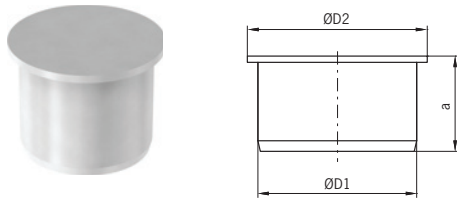
Seal material	Outlet diameter ØD [mm]	Dimensions		Weight [kg]	Item number	
		a [mm]	b [mm]		1.4301	1.4404
EPDM	75	139	90	0.5	98913	98963
	110	183	117	0.8	98915	98965
	125	210	135	0.9	419783	419785
	160	288	184	2.3	98917	98967
	200	293	186	3.7	419676	419678
	250	290	184	3.8	417127	417128
Viton	75	139	90	0.5	98914	98964
	110	183	117	0.8	98916	98966
	125	210	135	0.9	419784	419786
	160	288	184	2.3	98918	98968
	200	293	186	3.7	419677	419679
	250	290	184	3.8	417129	417130

Rat-stop



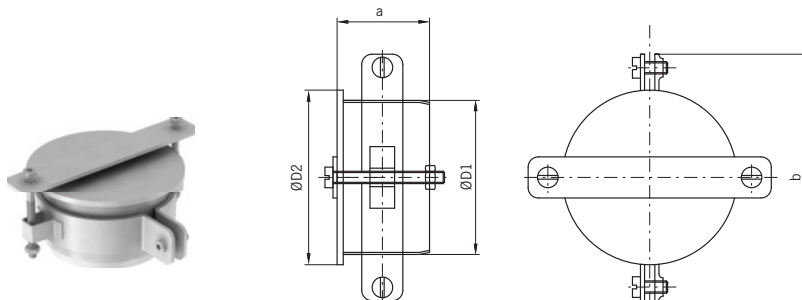
Seal material	Outlet diameter		Dimensions L [mm]	Weight [kg]	Item number	
	ØD1 [mm]	ØD2 [mm]			1.4301	1.4404
EPDM	110	250	864	3.8	419268	419270
Viton	110	250	864	3.8	419269	419271

Socket plug



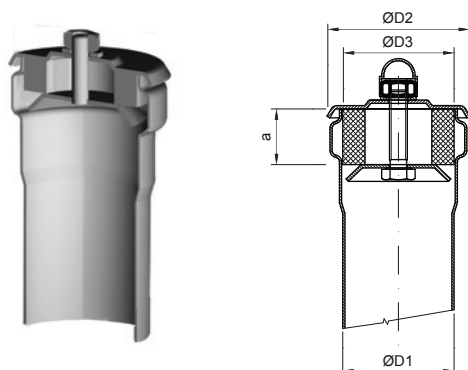
Outlet diameter		Dimensions a [mm]	Weight [kg]	Item number 1.4404
ØD1 [mm]	ØD2 [mm]			
50	58	45	0.1	98888
75	85	45	0.3	98889
110	120	45	0.5	98890
125	135	50	0.6	419782
160	170	50	0.5	98891
200	210	50	0.7	98994
250	260	83	1.0	417131

Socket plug with clamp



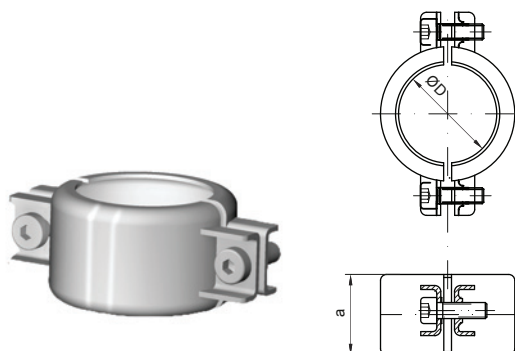
Outlet diameter		Dimensions		Weight [kg]	Item number 1.4404
ØD1 [mm]	ØD2 [mm]	a [mm]	b [mm]		
50	58	45	88	0.4	419138
75	85	45	120	0.6	419139
110	120	45	167	0.8	419140
160	170	50	214	1.1	419141
250	260	83	302	1.3	417132

Drainplugs with screwed plug



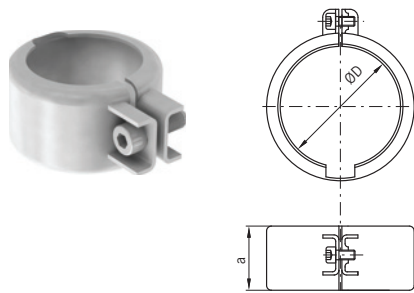
ØD1 [mm]	Outlet diameter		Dimensions a [mm]	Weight [kg]	Item number	Item number
	ØD2 [mm]	ØD3 [mm]			1.4301	1.4404
50	64	50	12	0,08	419942	419948
75	92	75	12	0,5	419943	419949
110	126	105	15	0,5	419944	419950
125	160	124	12	0,9	419945	419951
160	186	166	20	1,2	419946	419952

Socket clamp - two parts



Outlet diameter ØD [mm]	Dimensions a [mm]	Weight [kg]	Item number 1.4301	Item number 1.4404
50	40	0,14	417024	417025
75	40	0,25	417026	417027
110	43	0,34	417028	417029
125	45	0,38	417016	417017
160	45	0,48	417030	417031
200	45	0,51	-	419983
250	45	0,71	-	417137

Socket clamp

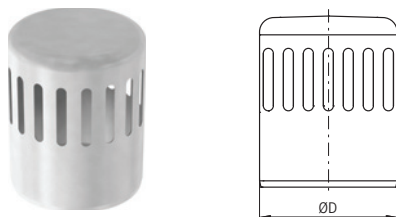


Outlet diameter ØD [mm]	Dimensions a [mm]	Weight [kg]	Item number 1.4404	
50	40	0.1	419134	
75	40	0.2	419135	
110	43	0.3	419136	
160	43	0.4	419137	

Socket clamp special

Outlet diameter ØD [mm]	Dimensions a [mm]	Weight [kg]	Item number 1.4301	Item number 1.4404
50	40	0.11	417066	417067
75	43	0.16	417068	417069

Vent cowl



Outlet diameter ØD [mm]	Weight [kg]	Item number 1.4404
110	0,4	98962

Reduction sealing cast Iron spigot → ACO pipe



Outlet diameter ØD [mm]	Weight [kg]	Item number EPDM
DN 70/75	0.06	400580
DN 100/110	0.10	400581

Note:

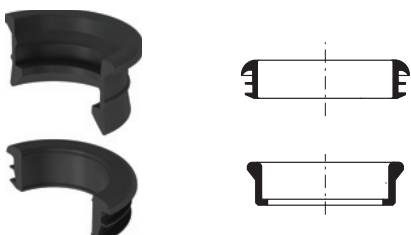
While purchasing AP reduction sealing cast iron spigot → ACO pipe it is necessary order AP cast iron connector.

Reduction sealing ACO pipe → cast Iron spigot



Outlet diameter ØD [mm]	Weight [kg]	Item number EPDM
DN 70/75	0.05	400586
DN 100/110	0.08	400587
DN 150/160	0.12	400588

Reduction sealing set cast Iron

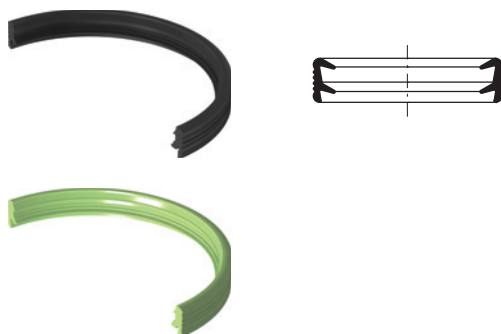


Outlet diameter ØD [mm]	Weight [kg]	Item number EPDM
DN 70/75	0.11	419370
DN 100/110	0.18	419371

Note:

Set of reduction sealings cast iron spigot → ACO pipe socket and ACO pipe spigot → cast iron socket.

Seal

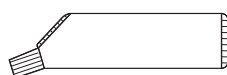


Outlet diameter ØD [mm]	Weight [kg]	Item number EPDM	Item number Viton
50	0.01	98400	98404
75	0.02	98401	98405
110	0.05	98402	98406
125	0.06	419453	419454
160	0.08	98403	98407
200	0.10	98433	98437
250	0.12	414146	414147

Note:

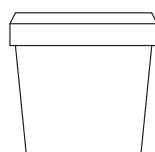
Spare ACO pipe seals in EPDM and Viton® grades are available for all pipe sizes. All seals incorporate the unique ACO pipe double lip seal arrangement for increased reliability and security. Both seal materials are mechanically interchangeable thereby facilitating easy on-site upgrade from EPDM to Viton®, or other. For seal installation instructions, refer to Installation recommendations (page 223). To enhance identification, the seals are colour coded as follows: EPDM seals are BLACK. Viton® seals are GREEN.

ACO Universal lubricant



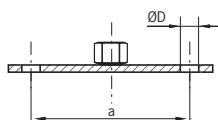
Weight [kg]	Item number
0.15	E80350000

ACO Universal lubricant in bucket 1kg



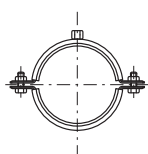
Weight [kg]	Item number
1.00	E80350001

Fixing plate



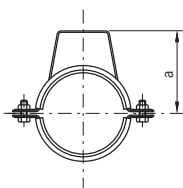
Outlet diameter ØD [mm]	Dimensions a [mm]	Weight [kg]	Item number Galvanised steel	Item number 1.4404
8.4	70	0.05	400525	400521

Support bracket with rubber infill



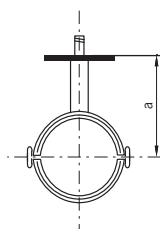
Outlet diameter ØD [mm]	Weight [kg]	Item number Galvanised steel	Item number 1.4404
50	0.14	400533	400529
75	0.23	400534	400530
110	0.33	400535	400531
125	0.36	419854	419855
160	0.39	400536	400532
200	0.44	419451	419675
250	0.60	-	417149

Support bracket with rubber infill and stirrup



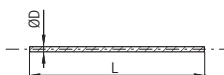
Outlet diameter ØD [mm]	Dimensions a [mm]	Weight [kg]	Item number Galvanised steel	Item number 1.4404
50	56	0.18	400541	400537
75	80	0.28	400542	400538
110	116	0.41	400543	400539
160	166	0.48	400544	400540

Support bracket with rubber infill and key



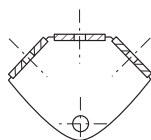
Outlet diameter ØD [mm]	Dimensions a [mm]	Weight [kg]	Item number Galvanised steel	Item number 1.4404
50	120	0.16	400549	400545
75	133	0.26	400550	400546
110	150	0.38	400551	400547
160	175	0.44	400552	400548

Threaded support pole M8



ØD [mm]	L [mm]	Weight [kg]	Item number Galvanised steel	Item number 1.4404
M8	1000	0.39	400557	400553
M8	90	0.03	400558	400554
M8	40	0.016	400559	400555

Set for axial fixing



Weight [kg]	Item number Galvanised steel	Item number 1.4404
0.11	400565	400561

Cutter manual set 50-110 mm



Note	Weight [kg]	Item number
in plastic case	3.50	419363

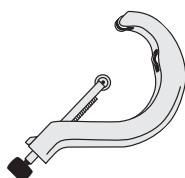
Replacement discs manual cutters



Note	Weight [kg]	Item number
for cutter 419363	0.005	419365

Note:
Minimum order quantity – 10 pcs.

Manual cutter



ØD [mm]	Weight [kg]	Item number
50–110	1.0	419364
110–160	2.0	400738

Note:
ACO pipe manual cutter should be ordered together with a holder for manual cutting.

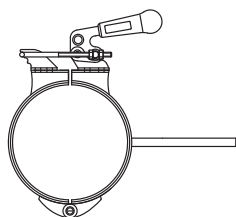
Replacement discs for manual cutter



Note	Weight [kg]	Item number
for cutter 400738 and 419364	0.005	400578

Note:
Minimum order quantity – 10 pcs.

Holder for manual cutting

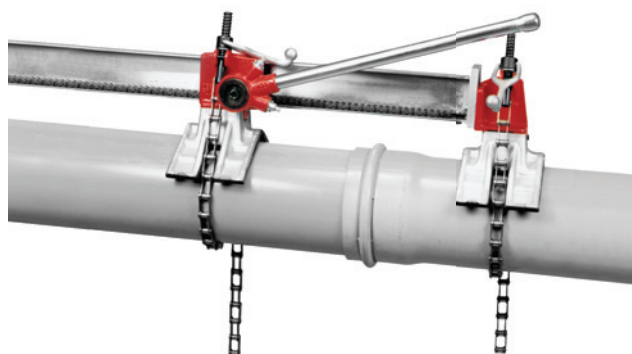


ØD [mm]	Weight [kg]	Item number
125	3.5	419857
160	4.0	400742
200	4.5	400743

Note:

While order AP holder for manual cutting it is necessary order AP manual cutter.

Joiner/disjoiner



ØD [mm]	Weight [kg]	Item number
100 - 400	25	417070

Flow rates

Full bore flow rate tables for varying gradients

For rainwater/storm drainage applications

Flow rates based on Colebrook-White formula.
Roughness coefficient $k_s = 0.6 \text{ mm}$

Gradient [%]	Pipe Ø 50 mm		Pipe Ø 75 mm		Pipe Ø 110 mm		Pipe Ø 125 mm	
	Flow rate Q [l/s]	Velocity v [m/s]	Flow rate Q [l/s]	Velocity v [m/s]	Flow rate Q [l/s]	Velocity v [m/s]	Flow rate Q [l/s]	Velocity v [m/s]
10.0	2.74	1.52	8.40	2.01	23.81	2.60	33.61	2.83
7.5	2.38	1.31	7.28	1.74	20.62	2.25	29.11	2.45
5.0	1.94	1.07	5.94	1.42	16.83	1.84	23.77	2.00
4.5	1.84	1.02	5.64	1.35	15.97	1.74	22.55	1.90
4.0	1.73	0.96	5.31	1.27	15.06	1.64	21.26	1.79
3.5	1.62	0.90	4.97	1.19	14.08	1.54	19.88	1.67
3.0	1.50	0.83	4.60	1.10	13.04	1.42	18.41	1.55
2.5	1.37	0.76	4.20	1.00	11.90	1.30	16.80	1.41
2.0	1.23	0.68	3.76	0.90	10.64	1.16	15.03	1.26
1.5	1.06	0.59	3.25	0.78	9.22	1.01	13.01	1.10
1.0	0.87	0.48	2.66	0.63	7.53	0.82	10.63	0.89

Gradient [%]	Pipe Ø 160 mm		Pipe Ø 200 mm		Pipe Ø 250 mm	
	Flow rate Q [l/s]	Velocity v [m/s]	Flow rate Q [l/s]	Velocity v [m/s]	Flow rate Q [l/s]	Velocity v [m/s]
10.0	64.15	3.31	116.89	3.83	218.31	4.45
7.5	55.56	2.87	101.22	3.32	188.95	3.85
5.0	45.36	2.34	82.65	2.71	154.13	3.14
4.5	43.03	2.22	78.40	2.57	146.17	2.98
4.0	40.57	2.10	73.92	2.43	137.77	2.81
3.5	37.95	1.96	69.14	2.27	128.82	2.63
3.0	35.13	1.81	64.01	2.10	119.20	2.43
2.5	32.07	1.66	58.43	1.92	108.74	2.22
2.0	28.68	1.48	52.26	1.71	97.18	1.98
1.5	24.84	1.28	45.26	1.48	84.05	1.71
1.0	20.28	1.05	36.95	1.21	68.48	1.40

Note:

The flow rates shown above assume an unrestricted discharge from the pipe. For installations without an unrestricted discharge, the flow rate will be affected by the downstream throttle.

For shallow gradients, the Colebrook-White formula underestimates flow rates (because when gradient tends towards zero %, velocity also tends to zero). For level or nearly level installations (slope < 1 %), spatially varied flow tables should be used.

Full bore flow rate tables for varying gradients

For soil/foul water drainage applications

Flow rates based on Colebrook-White formula.
Roughness coefficient $k_s = 0.6 \text{ mm}$

Gradient [%]	Pipe Ø 50 mm		Pipe Ø 75 mm		Pipe Ø 110 mm		Pipe Ø 125 mm	
	Flow rate Q [l/s]	Velocity v [m/s]	Flow rate Q [l/s]	Velocity v [m/s]	Flow rate Q [l/s]	Velocity v [m/s]	Flow rate Q [l/s]	Velocity v [m/s]
10.0	2.30	1.27	7.14	1.71	20.45	2.23	28.97	2.44
7.5	1.99	1.10	6.19	1.48	17.71	1.93	25.09	2.11
5.0	1.63	0.90	5.05	1.21	14.46	1.58	20.49	1.72
4.5	1.54	0.85	4.79	1.14	13.72	1.50	19.43	1.64
4.0	1.46	0.80	4.52	1.08	12.94	1.41	18.32	1.54
3.5	1.36	0.75	4.23	1.01	12.10	1.32	17.14	1.44
3.0	1.26	0.70	3.91	0.93	11.20	1.22	15.87	1.34
2.5	1.15	0.64	3.57	0.85	10.23	1.12	14.49	1.22
2.0	1.03	0.57	3.19	0.76	9.15	1.00	12.96	1.09
1.5	0.89	0.49	2.77	0.66	7.92	0.86	11.22	0.94
1.0	0.73	0.40	2.26	0.54	6.47	0.71	9.16	0.77

Gradient [%]	Pipe Ø 160 mm		Pipe Ø 200 mm		Pipe Ø 250 mm	
	Flow rate Q [l/s]	Velocity v [m/s]	Flow rate Q [l/s]	Velocity v [m/s]	Flow rate Q [l/s]	Velocity v [m/s]
10.0	55.61	2.87	101.81	3.34	206.87	4.22
7.5	48.16	2.49	88.17	2.89	177.84	3.62
5.0	39.32	2.03	71.99	2.36	143.52	2.93
4.5	37.30	1.93	68.30	2.24	135.71	2.77
4.0	35.17	1.82	64.39	2.11	127.46	2.60
3.5	32.90	1.70	60.23	1.98	118.69	2.42
3.0	30.46	1.57	55.76	1.83	109.29	2.23
2.5	27.80	1.44	50.90	1.67	99.10	2.02
2.0	24.87	1.28	45.53	1.49	87.86	1.79
1.5	21.53	1.11	39.43	1.29	75.18	1.53
1.0	17.58	0.91	32.19	1.06	60.25	1.23

Note:

The flow rates shown above assume an unrestricted discharge from the pipe. For installations without an unrestricted discharge, the flow rate will be affected by the downstream throttle.

For shallow gradients, the Colebrook-White formula underestimates flow rates (because when gradient tends towards zero %, velocity also tends to zero). For level or nearly level installations (slope < 1 %), spatially varied flow tables should be used.

Full bore flow rate table for levelled or nearly level gradients

Flow rates based on spatially-varied flow formula for steady non-uniform flow

Strickler coefficient = 90

Pipe diameter [mm]	Length [mm]	Gradient			
		0.0% Flow rate Q [l/s]	0.25% Flow rate Q [l/s]	0.5% Flow rate Q [l/s]	0.75% Flow rate Q [l/s]
50	5	0.40	0.57	0.75	0.92
50	10	0.30	0.54	0.75	0.92
50	15	0.26	0.53	0.75	0.92
50	20	0.23	0.53	0.75	0.92
75	5	1.45	1.75	2.40	2.90
75	10	1.10	1.72	2.35	2.90
75	15	0.95	1.70	2.35	2.90
75	20	0.85	1.70	2.35	2.90
110	5	4.50	5.55	6.75	8.15
110	10	3.60	5.05	6.60	8.15
110	15	3.20	4.90	6.50	8.15
110	20	2.80	4.80	6.50	8.15
125	5	6.45	7.90	9.60	11.45
125	10	5.20	7.25	9.50	11.45
125	15	4.55	7.00	9.50	11.45
125	20	4.10	6.85	9.50	11.45
160	5	13.00	15.40	18.60	21.20
160	10	10.90	14.30	18.50	21.20
160	15	9.50	13.80	18.40	21.20
160	20	8.50	13.50	18.30	21.20
200	5	24.80	29.00	34.20	38.70
200	10	20.80	26.70	33.80	38.40
200	15	18.60	25.70	33.70	38.40
200	20	17.00	25.00	33.60	38.40

Note:

Using spatially varied flow equations, and with level or nearly level pipes, the length to an outlet will determine the maximum flow rate through the pipe.

The flow rates shown above assume an unrestricted discharge from the pipe. For installations without an unrestricted discharge, the flow rate will be affected by the downstream throttle.

Operating pressures

The ACO pipe socketed stainless steel pipe systems are fitted with an unique, double lip seal manufactured from either EPDM or Viton®. The double lip seal arrangement provides added security for the ultimate long term reliability. The ACO pipe; socketed stainless steel pipe systems are tested and approved for operating pressures in gravity, siphonic and vacuum systems.

ACO pipe stainless steel pipe systems are designed for maximum working pressure 0.5 bar according to EN 1124. In case where higher pressure may apply, it is necessary to combine the system with socket clamps.

Pipe diameter [mm]	Operating pressure [bar]	
	Without socket clamp	With socket clamp
50	0.5	2.0
75	0.5	2.0
110	0.5	2.0
125	0,5	2,0
160	0,5	1,0
200	0,3	1,0
250	0,3	1,0

Vacuum applications	
Pipe diameter [mm]	Operating pressure [bar]
50	-0,8
75	-0,8
110	-0,8
125	-0,8
160	-0,8
200	-0,8
250	-0,8





			Page
Transport & handling	Transport & handling information	ACO gully	198
		ACO channel	198
		ACO grating	199
		ACO pipe	199

Transport & handling information

ACO gully

- ACO gullies are packed on framed pallets, protected by cardboard inserts and PE foil. Individual products are packed in protective plastic net.
- Outlet pipes are equipped with protective lids.
- Gully tops and flanges are covered with protective blisters, which also protect the inside areas during installation. Individual products are packed in plastic protective net.
- Handle the gully/ gully parts with care. Any rough manipulation (like dragging along the ground, dumping off the truck...) can cause deformation and potentially cause product malfunctions.
- Contact with carbon steel may cause stainless steel corrosion.

ACO channel

- The maximum transportable length of channel is 6 000 mm. In case of container or air transport, the recommended maximum transport length is 2 000 mm. Long channels over 6 000 mm are standardly divided in 6 m sections with transport joins.
- If one piece channel is required, the channel will have to be welded on site. Please contact our Sales/Technical department.
- ACO channel is for such requirement packed on framed/ non framed pallets fixed by plastic tape.
- Products are protected by wooden inserts and frames, in some cases PE foil or bubble foil is used.
- Articles are either wrapped separately in ACO paper box or placed loose within EUR pallet space. It is strongly recommended that channels / channel parts / accessories are transported in their original packaging to avoid damage and / or loss of parts.
- Store preferably on dry and flat surface.
- Handle the channels/ channel parts/ accesories with care. Careful truck un/loading procedures are crucial. Any rough manipulation (like dragging along the ground, dumping off the truck etc...) can cause deformation and potentially cause product malfunctions.
- Contact with carbon steel may cause stainless steel corrosion.

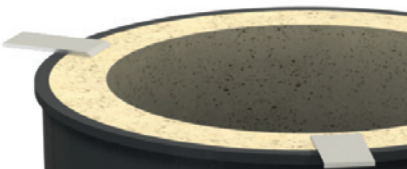
ACO grating

- Standard grating length for ACO hygienic box channel is 500 mm and 1 000 mm for ACO modular box channel.
- ACO grating is packed on framed pallets protected by cardboard inserts and PE foil.
- Articles are either wrapped separately in ACO paper box or placed loose within EUR pallet space.
- It is strongly recommended to transport gratings in their original packaging to avoid damage. Store preferably on dry and flat surface.
- Handle the gratings with care.
- Any rough manipulation (like dragging along the ground, dumping off the truck...) can cause deformation and potentially cause product malfunctions.
- Contact with carbon steel may cause stainless steel corrosion.

ACO pipe

- Maximum transport length of straight pipes pallets is 6 080 mm and width 820 mm.
- Straight pipes are packed on framed/ non framed long pallets, protected by wooden inserts and supports.
- Articles are either wrapped in cardboard and stretch or PE foil. Fittings are packed in cardboard boxes and stacked on foiled EUR pallets.
- It is strongly recommended to transport and store the pipes and fittings in their original packaging to avoid damage and/or the loss of parts. Store preferably on dry and flat surface.
- Handle the pipes and fittings with care. Any rough handling (like dragging along the ground, dumping off the truck...) can cause deformation and potentially cause product malfunctions.
- Contact with carbon steel may cause stainless steel corrosion.





		Page
ACO fire protective solution	ACO gullies and ACO channels	Introduction 202
		Installation and function 203
	ACO pipes	Installation and function 204

Introduction

ACO has developed a solution which prevents the spreading of fire and high temperatures within different building's floors where ACO hygienic gully, ACO hygienic channel and ACO pipe are installed.

The solution has been tested according to EN 1366-2 Fire resistance tests for service installations and classified according to EN 13501 Fire classifications of construction products and building elements. For classification details please see chart below.

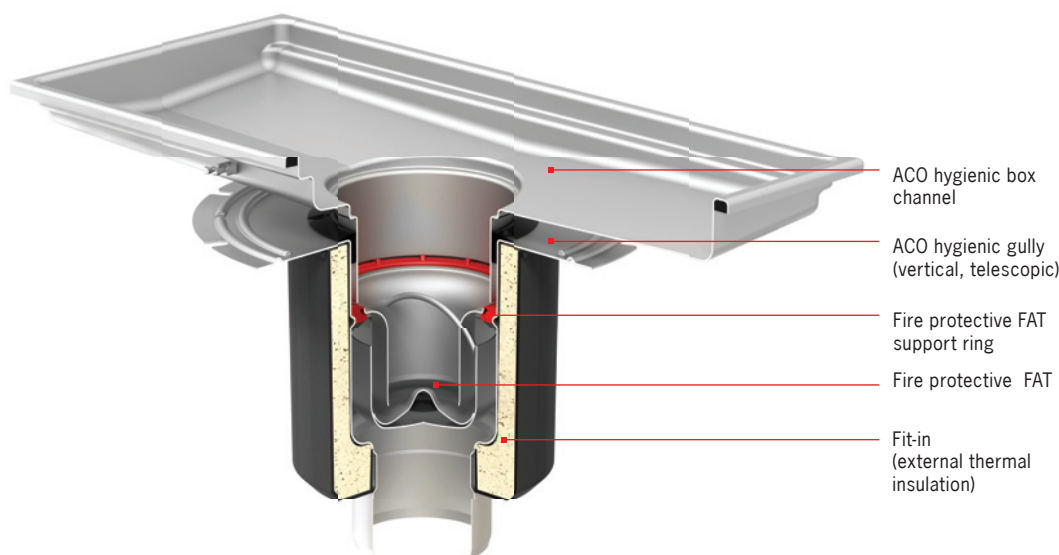
ACO fire protective kit can be used with telescopic vertical or fixed height vertical ACO hygienic gully and with ACO hygienic box channel, consisting of following items:

- External protection – Fit in
- Internal protection
 - Fire protective foul air trap
 - Fire protective foul air trap support

This solution has been designed and tested for use in either concrete or aerated concrete ceiling slabs with a minimum height of 150 mm.

ACO hygienic gully and ACO hygienic box channel installed with ACO fire protective kit can be connected to any kind of sewerage with ACO pipe regardless of its material, e.g. non combustible cast iron drain pipes SML, stainless steel ACO pipe (building material class A1) or plastic drain pipes (building material class B1/B2). All mentioned components of external and internal protection must be used to guarantee correct function of fire protection!

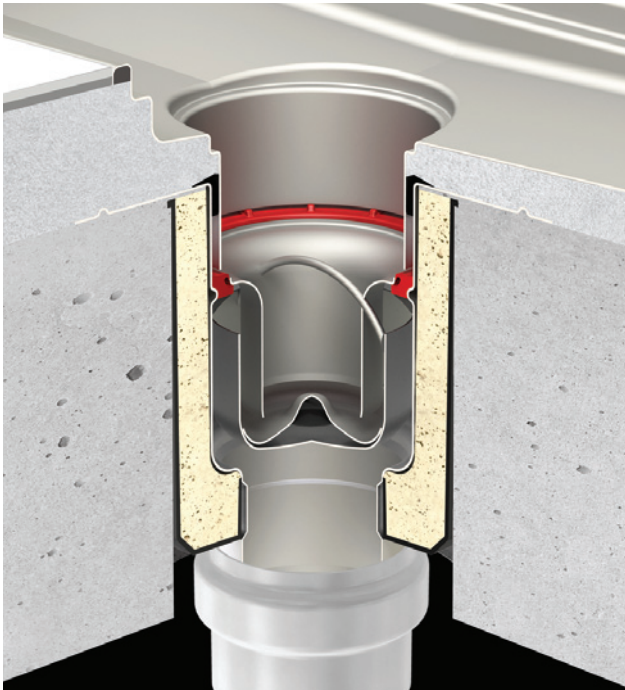
Tested at: PAVUS, a.s. protocol: No. Pr-13-2.061



Gully type	Outlet diameter	Classification
ACO hygienic gully 142	75	EI 180
	110	EI 120
ACO hygienic gully 157	75	EI 180
	110	EI 120
ACO hygienic gully 218	110	EI 180
	160	EI 90

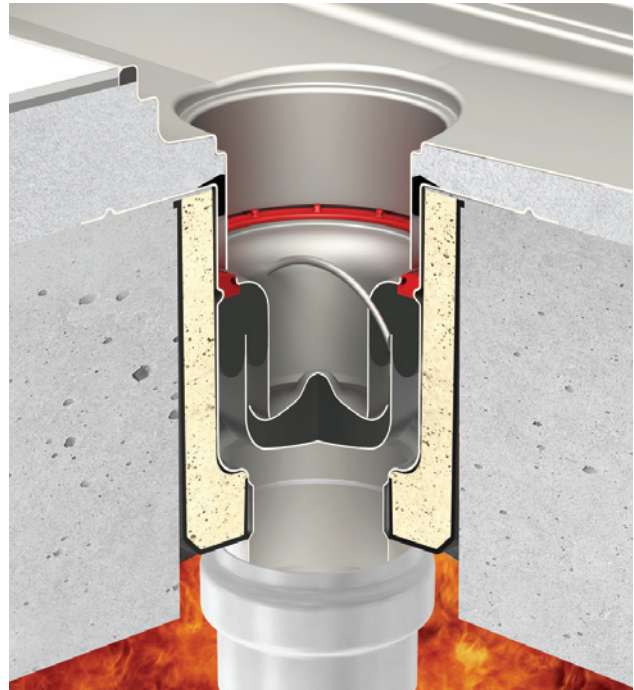
Classification according to EN 13 501, protocol: PK2-11-13-901-C-0

Installation and function



Before activation

- Installation scheme with assembled fire protective solution in ceiling construction.



Fire activation

- Function of fire protective solution to prevent the spread of fire within storey structure by transmission (ACO gully).
- Time preventing the spread of fire is limited from 90 minutes to 180 minutes.

Installation and function

ACO pipe push-fit system is classified and certified as a non-combustible product (as it is manufactured in compliance to EN 1124, part 1 & part 2). This standard classifies the ACO pipe systems as class A1 fire resistant (highest rating).

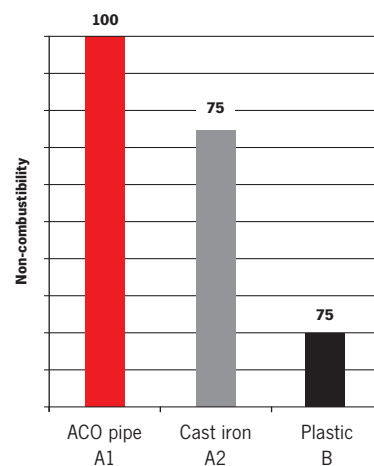
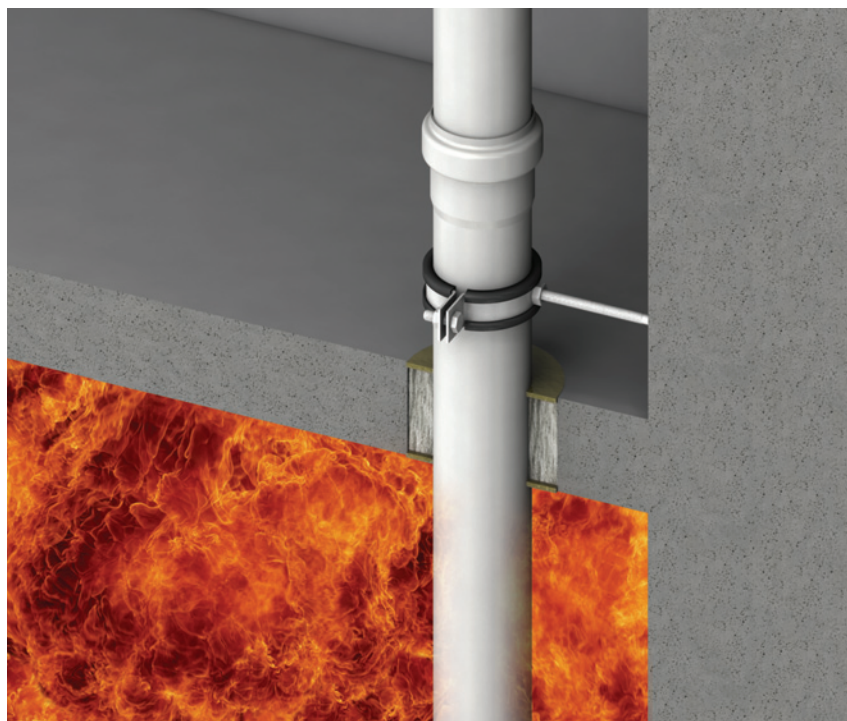
ACO pipe systems are certified also by SITAC authority as fire resistant (cert. no. 0410-01).

Special certificate of fire resistance for coated pipes (no. CSI PK-13-083) is available.

Fire certificates from marine authorities are available.

Non combustibility:

- Non combustible
- No additional fire collars needed at installation
- No toxic fumes emitted in case of fire
- EN 1124







		Page
Cleaning procedures	ACO cleaning principles for drainage	Introduction
		208
		Principles of cleaning
		209
		Cleaning chemicals
		210
		Manual cleaning of drainage
		211
		Chemical cleaning of drainage
		212
		Overview with recommended cleaning procedures for drainage
		213

Introduction

Drainage is a critical component affecting the hygienic performance of commercial food preparation business. Effective drainage helps to mitigate hazards from the external environment and is central to the safe and hygienic operation internally. Within the food production facility, surface liquids represent potential hazard of microbiological contamination. Liquids may be part of the cleaning process, or

may originate from specific equipment discharge points, or be simply the result of an accidental spillage. Quite often the liquids contains other components – organic matter being predominant. Floor drainage components cater for these situations through three core functions - interception, conveyance of fluids, and ability to act as a barrier.

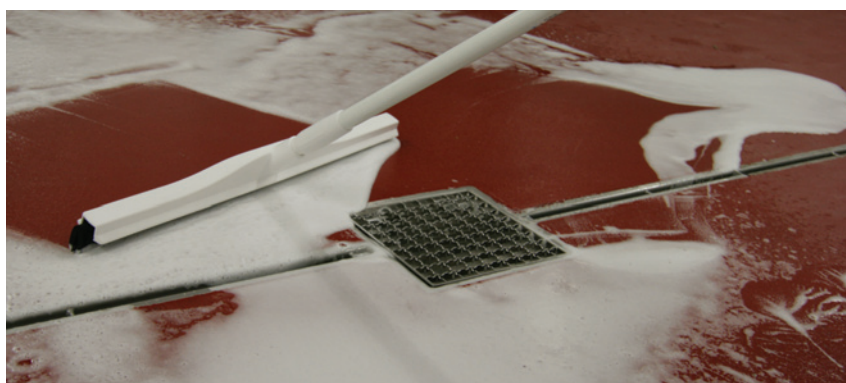
Effective cleaning of drainage in commercial food preparation business reduces risk of contamination and spoiling of food during preparation, processing, and storage. The main objective of cleaning is to remove soil to obtain clean surface and thereby reduce number of microorganisms. A further reduction of microorganism can be obtained by disinfection step.

Principles of cleaning

The principles of cleaning involve combination of thermal, kinetic and chemical energy. The cleaning processes are always combination of these factors and time of these to work. The key point to highlight is that all equipment – **including drainage** – in food processing plant should have hygienic design, which is easy to clean and disinfect. Otherwise the cleaning process is time and energy consuming and not cost effective. All surfaces of ACO stainless steel drainage are hygienically designed – no sharp corners, edges, dead spaces and crevices. ACO drainage is easily accessible for cleaning and visual inspection.

The effectiveness of drainage cleaning depends on number of factors:

- Soil type and properties
- Material, design and surfaces
- Water quality
- Cleaning chemicals
- Cleaning procedure
- Cleaning parameters; like temperature, time, flow velocity and concentration of chemicals



There are two different types of surface to be cleaned:

Product contact surface

All equipment that intentionally or unintentionally (e.g. due to splashing) comes to contact with final product or from which product or condensate may drain, drop or be drawn into the main product or product container.

Non product contact surface

All other exposed surfaces, including surfaces associated with equipment, such as support structures, control panels and external surfaces. It also includes surfaces related to the manufacturing environment, such as floors, walls and drain channels.

We also differentiate cleaning process as whether it is applied dry or wet.

Dry cleaning

Dry cleaning is essentially a mechanical removal of soils using sweeping, brushing, wiping and vacuuming. Environments typically to be cleaned by dry methods include plants which are producing flour, cocoa, dry milk products, dry soups and dry infant formulas.

Wet cleaning

Wet cleaning involves application of fluids (usually water based) to achieve the desired cleaning result. This can be applied to Open Plant Cleaning (OPC): surfaces to be cleaned have to be accessible to fluids. In addition, some components may be physically removed from production area and cleaned separately – Cleaning out of place (COP). Drainage systems require wet cleaning.

The last is a distinction between whether the cleaning process is done manually or automatically.

Manual cleaning

Manual cleaning is generally considered as labour intensive and, therefore often expensive. The manual tools should be hygienic – resistant to applied chemicals and suitable for a specific operation. On top of it; operators should be properly trained to be able to perform cleaning as expected to achieve clean surfaces. ACO drainage has all elements of hygienic design that makes cleaning of ACO drainage much easier and faster when compared to competitive products.

Automatic cleaning

Utensils and dismantled parts of equipment are cleaned and disinfected automatically in industrial washing machines, tray or tunnel washers (automatic COP). CIP is also defined as automatic cleaning system.

Cleaning chemicals

There are three main classes of cleaning compounds:

- detergents
- alkalies
- acids
- disinfectants/sanitizers

Detergents

This broad group of chemicals is widely used in households and in food industries brings different type of soil from surfaces into cleaning foams and emulsions that could be easily rinsed off.

Alkalies

Alkaline compounds are effective for dissolution of proteins and removal of fats. Example of alkalies are sodium hydroxide (caustic soda) and potassium hydroxide. These compounds are hazardous to personnel and mostly used in CIP – automatic dosing system is recommended.

Acids

Acids, both organic and inorganic, are commonly used for removal of mineral deposits, such as: hard water scale or milkstone. Acids are potentially corrosive to construction materials and must be used with care.

When chemical cleaning is performed, it is necessary to use low-pressure sprays, foam or gel. Foam and gel are more viscous than sprayed agents and preferred as they are not prone to aerosol formation. Selection of the correct detergent for given application should be always done in co-operation with the detergent supplier.

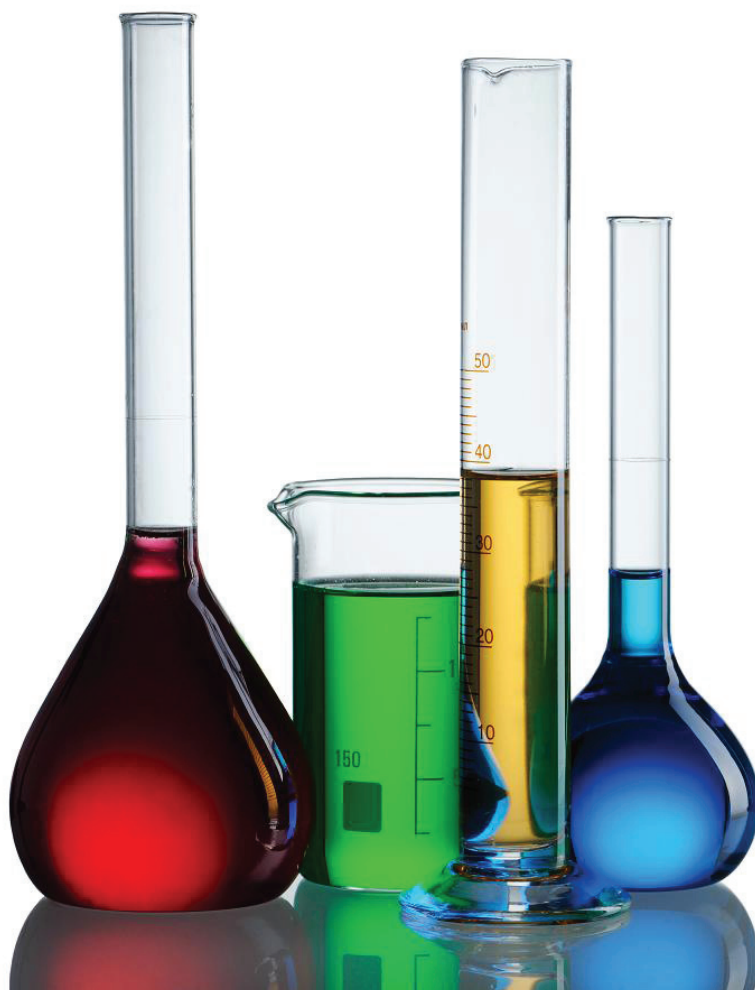
Disinfectants/sanitizers

In case of high risk areas or production areas with microbiological sensitive products, the floors and drain systems should be sprayed with disinfectants/sanitizers, which will reduce the contamination risk even more. The disinfectants/sanitizers will kill remaining micro-organisms, according to the required specifications.

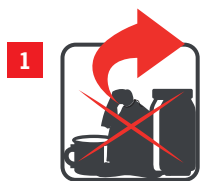
The plant downtime and labour associated with cleaning is major cost of any food processing operation.

Sources of soil

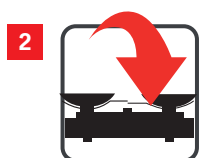
Primary source of soil is from processed food product itself. Microbiological bio-films mainly contribute to the soil build ups on drainage surfaces. These films vary in their solubility depending upon such factors as heat effect, age, dryness, time, etc. It is essential that personnel involved in the cleaning process design have understanding of the nature of the soil to be removed before selecting a detergent and cleaning method. The rule of thumb is that acid cleaners dissolve alkaline soils (minerals), and detergents dissolve acid soils and food wastes (proteins).



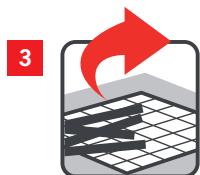
Manual cleaning of drainage



Remove all present grocery, raw materials, wrapping materials and tools.



Cover all equipment that could be contaminated.



Remove excess dirt from floor and gratings, and place into designated container.



Remove gratings.



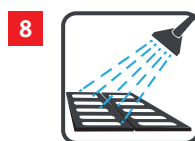
Remove and empty silt basket and foul air trap.



Place collected waste and dirt into designated container. Rinse grating, silt basket and foul air trap with clean water. Then place foul air trap into its original position.



Wash all surfaces with designated detergent and designated hand brush.



Rinse all surfaces with clean water.



Visually check surface cleanliness - repeat cleaning process if necessary.



Place silt basket and grating to its original position.



Rinse the entire equipment with clean water.

Chemical cleaning of drainage



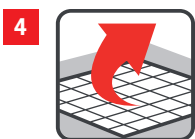
1 Remove all present grocery, raw materials, wrapping materials and tools.



2 Cover all equipment that could be contaminated.



3 Remove excess dirt from floor and gratings; and place into designated container.



4 Remove gratings.



5 Remove and empty silt basket and foul air trap.



6 Place collected waste and dirt into designated container. Rinse grating, silt basket and foul air trap with clean water. Then place foul air trap into its original position.



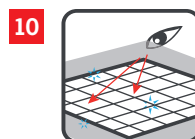
7 Apply foam to all surfaces.



8 Leave foam for 15 minutes.



9 Rinse off foam with clean water.



10 Visually check surface cleanliness - repeat cleaning process if necessary.



11 Place silt basket and grating to its original position.



12 Rinse the entire equipment with clean water.

Overview with recommended cleaning procedures for drainage

These instructions are for guidance only. **Always follow manufacturer's instructions.**
 All procedures have to be verified and adjusted to the application specifics.

Frequency	Procedure	Physical agents	Chemical agents	Examples of chemical cleaning agents suitable for ACO stainless steel drainage
Daily	Removal of organic deposits (fats, proteins, saccharides and polysaccharides)	▪ Steam ▪ Medium pressure water to max 25 bar ▪ Mechanical / kinetic energy (brushes, CIP medium velocity)	▪ Caustics (sodium hydroxide, potassium hydroxide) ▪ Detergents / surfactants	Standard chemical agents used for floor cleaning should be sufficient (should be validated) Oxofoam, Endorochlor (JohnsonDiversey)
Weekly	Removal of inorganic deposits that could promote very resistant biofilms	Mechanical abrasive methods – polishing	▪ Nitric acid for stainless steel passivation where chlorine attack could be expected ▪ Inorganic acids (phosphoric acid) ▪ Weak organic acids	▪ Acifoam (JohnsonDiversey) ▪ Acigel (JohnsonDiversey) ▪ Super Dilac (JohnsonDiversey)
Note	Removal of rinse water residues	Removal of excess water with a squeegee	Alcohols (isopropylalcohol, ethanol)	Chlorine tablets (Suma Tab D4 by JohnsonDiversey) are often added to the water in foul trap in microbial sensitive production area's

Any cleaning procedures, including those recommended by equipment suppliers, must be properly validated at the equipment, where it will be applied and on the soil that could be expected even after certain time of usage.

Always follow manufacturer's instructions to avoid damage to the equipment.



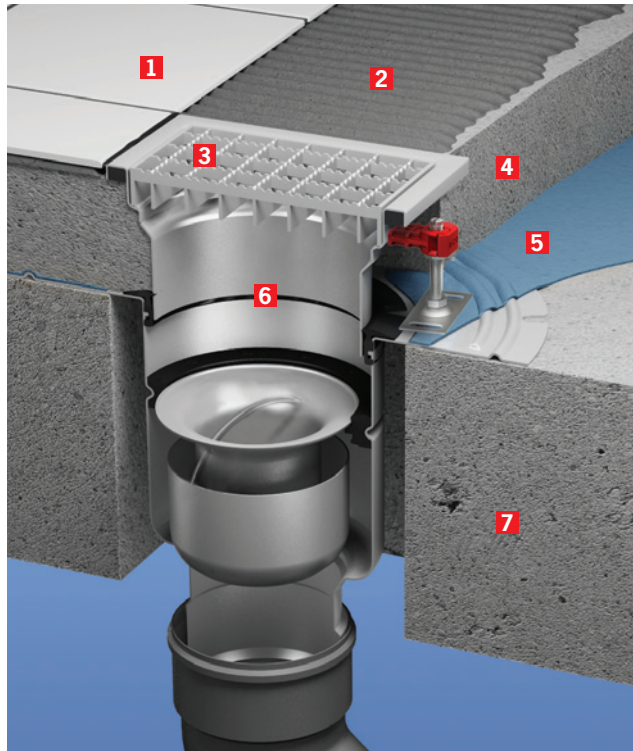


		Page
Typical installation examples	Installation recommendation	ACO hygienic gully
		216
		ACO hygienic box channel
		219
		ACO vinyl box channel
		221
		ACO modular box channel
		222
		ACO modular slot channel
		225
		ACO pipe
		227

ACO hygienic gully

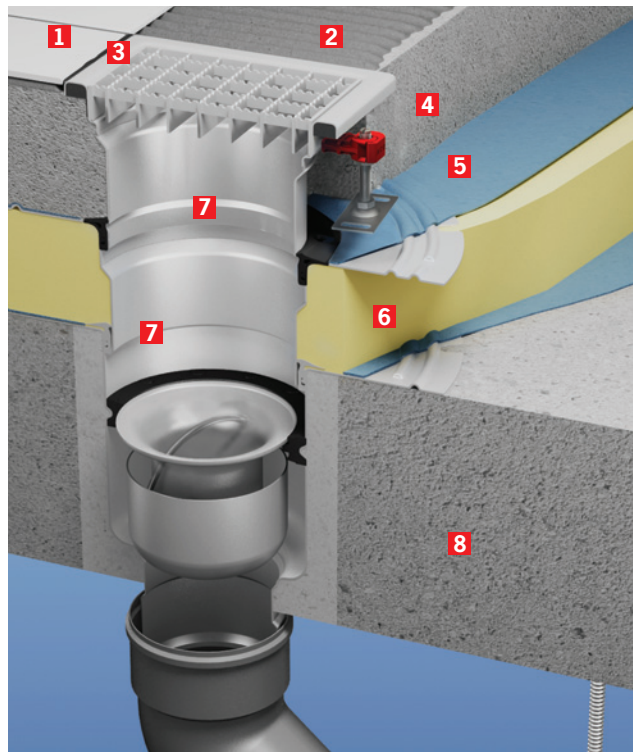
ACO hygienic gully – telescopic flanged gully installed in suspended concrete slab construction

- 1** Ceramic tiles
- 2** Tile cement
- 3** Mastic sealant
- 4** Floor screed
- 5** Water proof membrane (WPM)
- 6** Gully
- 7** Suspended concrete slab core-boarded to accept gully body



ACO hygienic gully – telescopic flanged gully and raising flanged piece installed in suspended concrete slab construction

- 1** Ceramic tiles
- 2** Tile cement
- 3** Mastic sealant
- 4** Floor screed
- 5** Water proof membrane (WPM)
- 6** Insulation
- 7** Double flange gully
- 8** Suspended concrete slab core-boarded to accept gully body



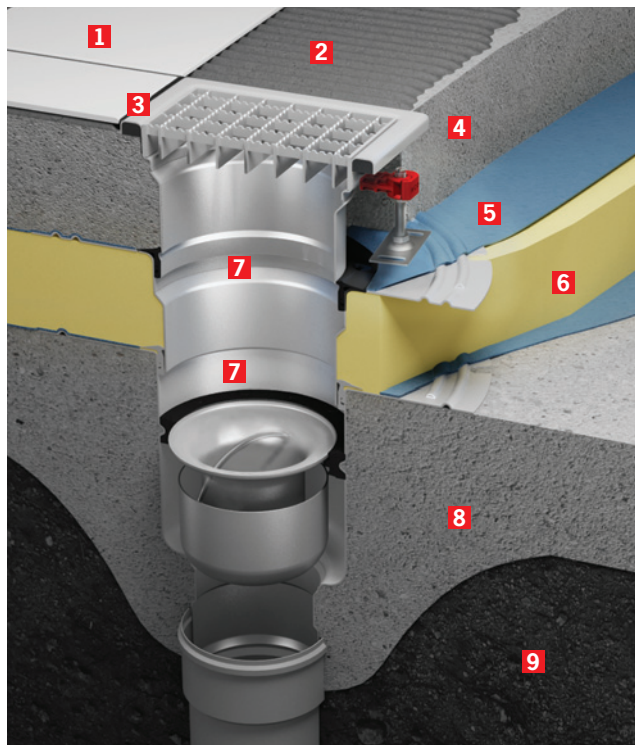
ACO hygienic gully – telescopic flanged gully installed in solid concrete floor

- 1** Ceramic tiles
- 2** Tile cement
- 3** Mastic sealant
- 4** Floor screed
- 5** Water proof membrane (WPM)
- 6** Flange gully
- 7** Solid concrete floor slab
- 8** Compacted soil



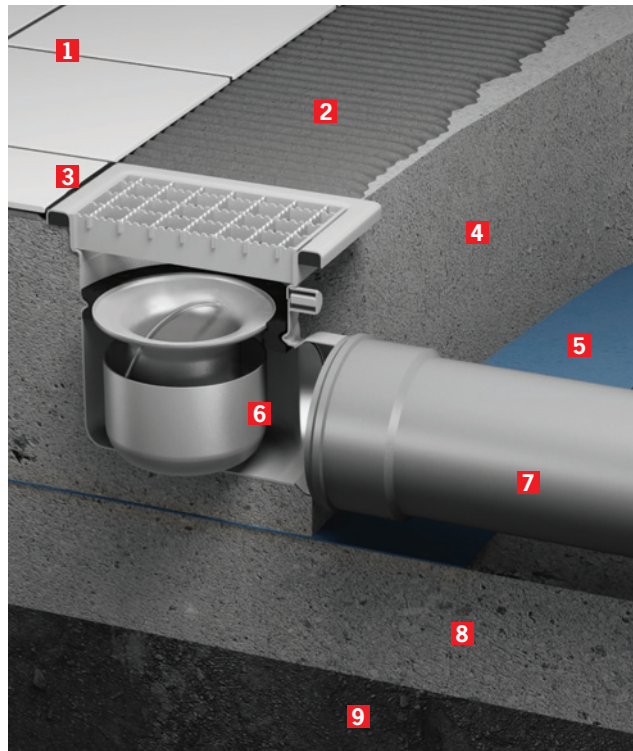
ACO hygienic gully – telescopic flanged gully and raising piece installed in solid concrete floor

- 1** Ceramic tiles
- 2** Tile cement
- 3** Mastic sealant
- 4** Floor screed
- 5** Water proof membrane (WPM)
- 6** Insulation
- 7** Double flange gully
- 8** Solid concrete floor slab
- 9** Compacted soil



ACO hygienic gully – fixed height gully installed in solid concrete floor

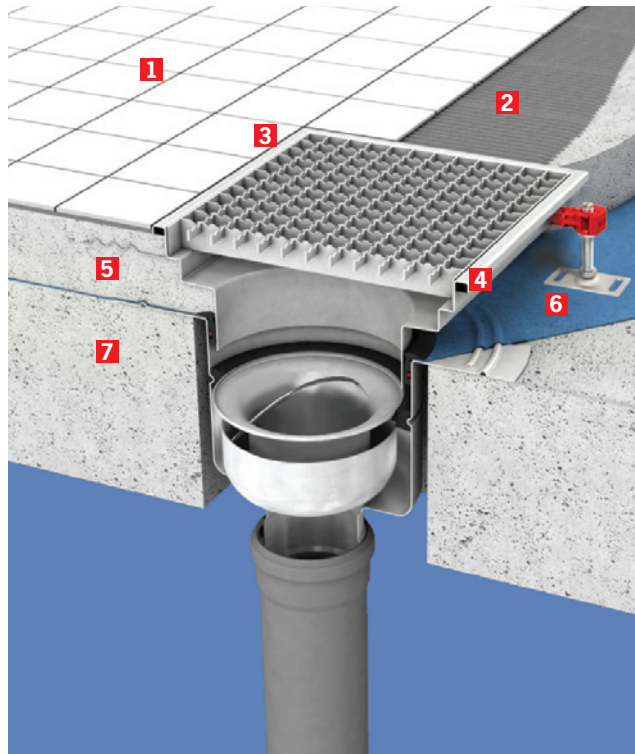
- 1** Ceramic tiles
- 2** Tile cement
- 3** Mastic sealant
- 4** Floor screed
- 5** Damp proof membrane (DPM)
- 6** Gully
- 7** Outlet pipe
- 8** Floor slab
- 9** Compacted soil



ACO hygienic box channel

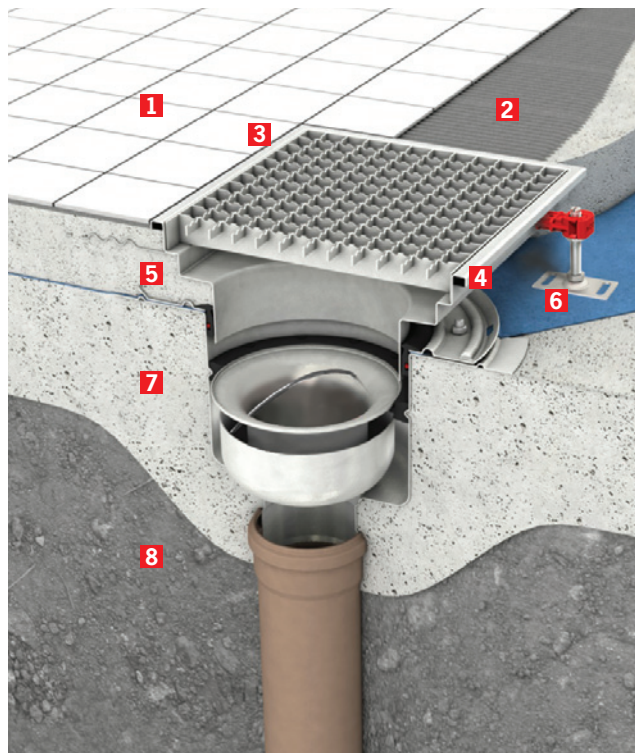
**ACO hygienic box channel standard type – ACO hygienic gully with adhesive bonding flange
(Tiled floor)**

- 1** Ceramic tiles
- 2** Tile cement
- 3** Mastic sealant
- 4** Rubber infill
- 5** Floor screed
- 6** Water proof membrane
- 7** Solid concrete floor slab



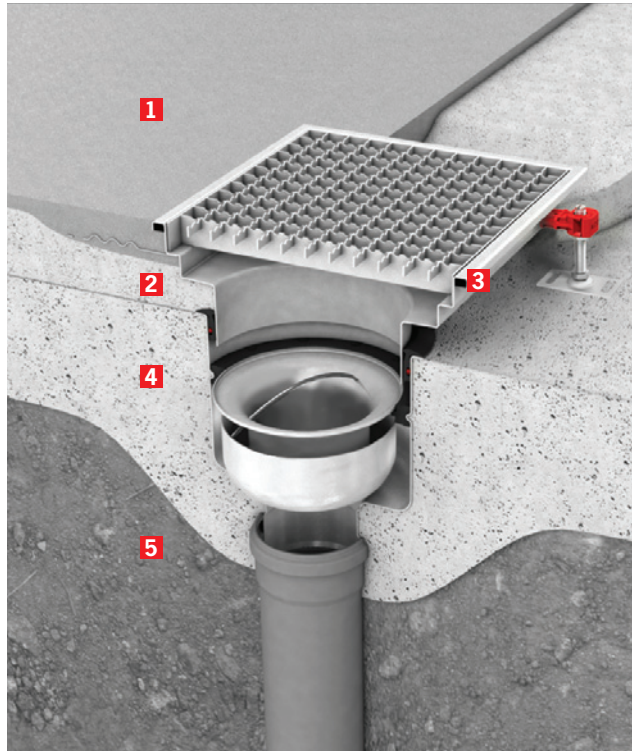
**ACO hygienic box channel standard type – ACO hygienic gully with mechanical clamping flange
(Tiled floor)**

- 1** Ceramic tiles
- 2** Tile cement
- 3** Mastic sealant
- 4** Rubber infill
- 5** Floor screed
- 6** Water proof membrane
- 7** Solid concrete floor slab
- 8** Compacted soil



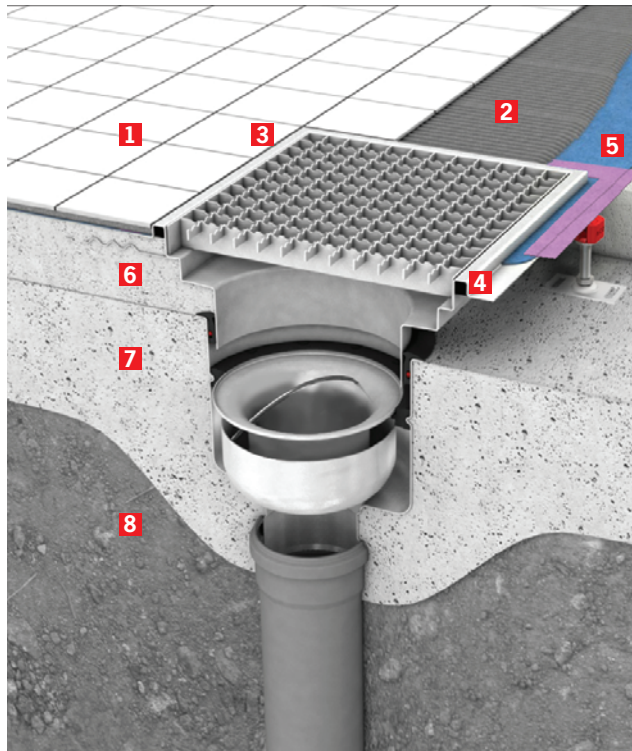
ACO hygienic box channel standard type – ACO hygienic gully with location flange (Resin floor)

- 1** Epoxy/resin floor
- 2** Floor screed
- 3** Rubber infill
- 4** Solid concrete floor slab
- 5** Compacted soil



ACO hygienic box channel extendend type – ACO hygienic gully with location flange (Tiled floor)

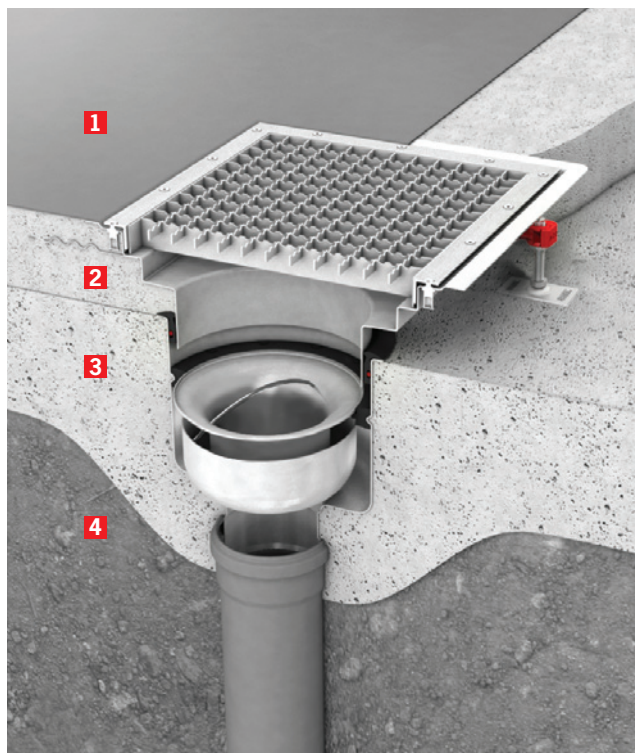
- 1** Ceramic tiles
- 2** Tile cement
- 3** Mastic sealant
- 4** Rubber infill
- 5** Water proof membrane
- 6** Floor screed
- 7** Solid concrete floor slab
- 8** Compacted soil



ACO vinyl box channel

ACO vinyl box channel – ACO hygienic gully with location flange (Vinyl floor)

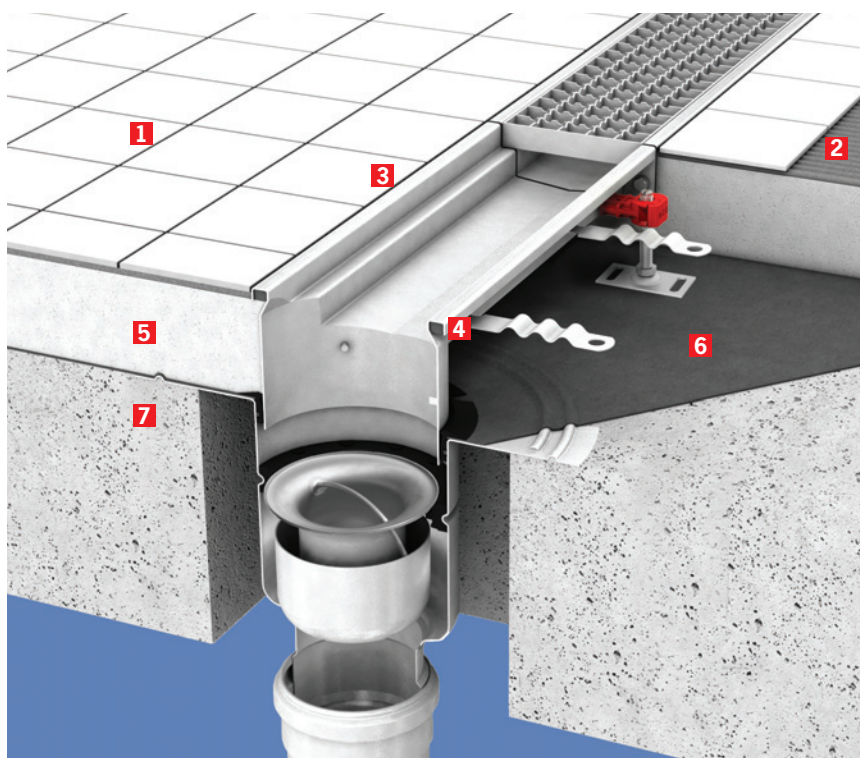
- 1** Vinyl floor
- 2** Floor screed
- 3** Solid concrete floor slab
- 4** Compacted soil



ACO modular box channel

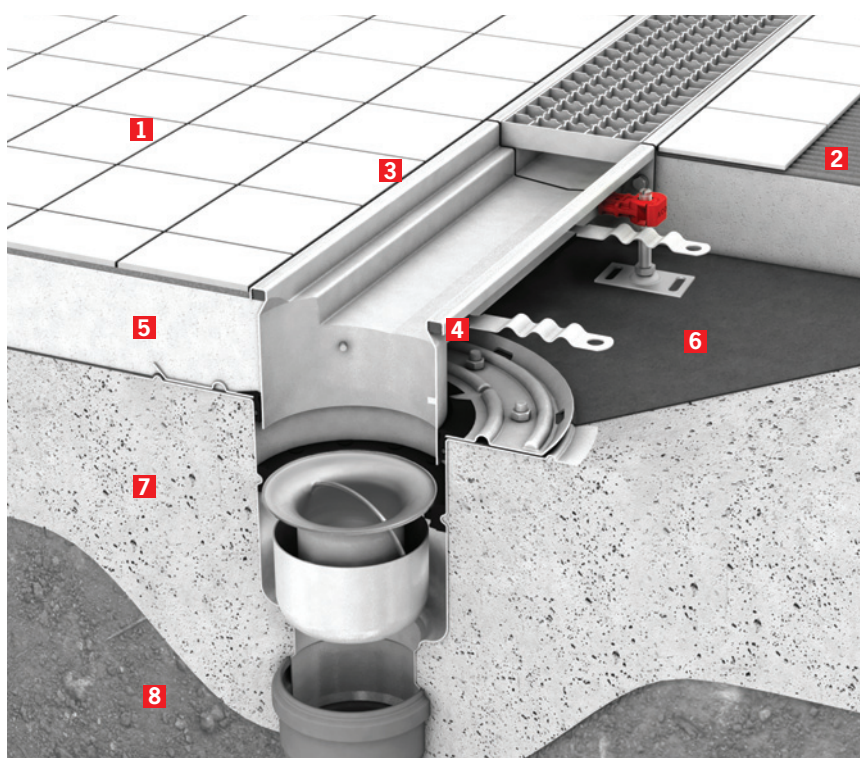
**ACO modular box channel standard type – ACO hygienic gully with adhesive bonding flange
(Tiled floor)**

- 1** Ceramic tiles
- 2** Tile cement
- 3** Mastic sealant
- 4** Rubber infill
- 5** Floor screed
- 6** Water proof membrane
- 7** Solid concrete floor slab



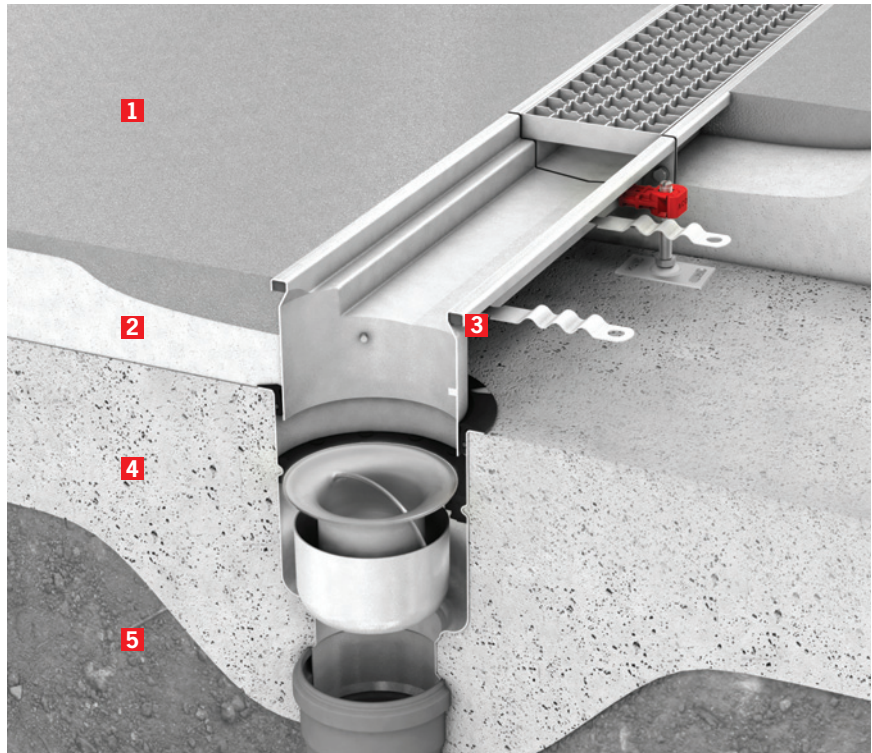
**ACO modular box channel standard type – ACO hygienic gully with mechanical clamping flange
(Tiled floor)**

- 1** Ceramic tiles
- 2** Tile cement
- 3** Mastic sealant
- 4** Rubber infill
- 5** Floor screed
- 6** Water proof membrane
- 7** Solid concrete floor slab
- 8** Compacted soil



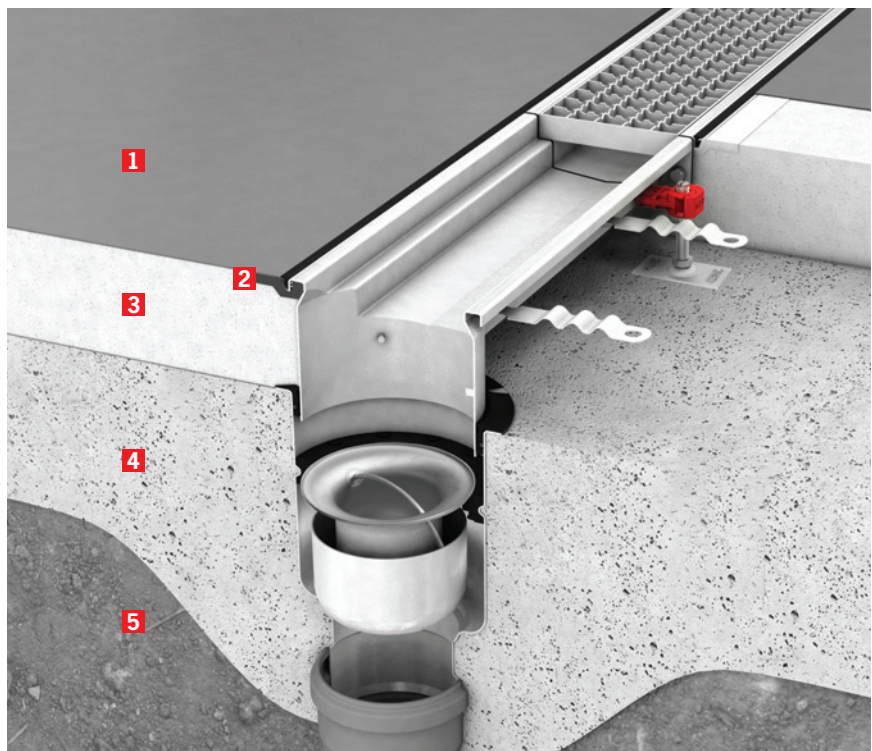
ACO modular box channel standard type – ACO hygienic gully with location flange (Resin floor)

- 1** Epoxy/resin floor
- 2** Floor screed
- 3** Rubber infill
- 4** Solid concrete floor slab
- 5** Compacted soil



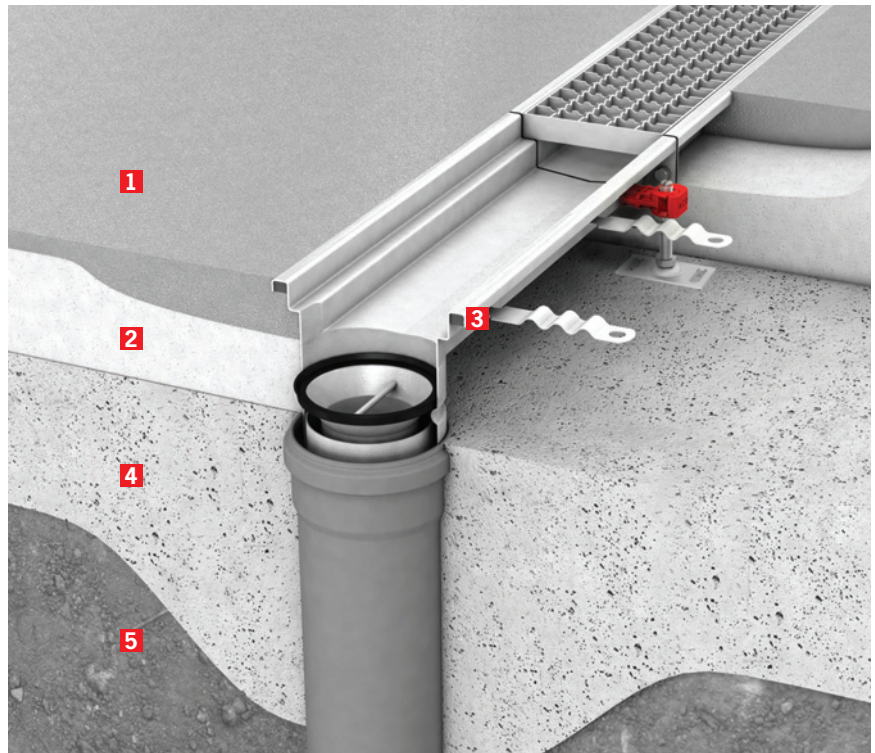
ACO modular box channel vinyl type – ACO hygienic gully with location flange (Vinyl floor)

- 1** Vinyl floor
- 2** Vinyl seal
- 3** Floor screed
- 4** Solid concrete floor slab
- 5** Compacted soil



ACO modular box channel standard type – direct connection to sewage pipe system (Resin floor)

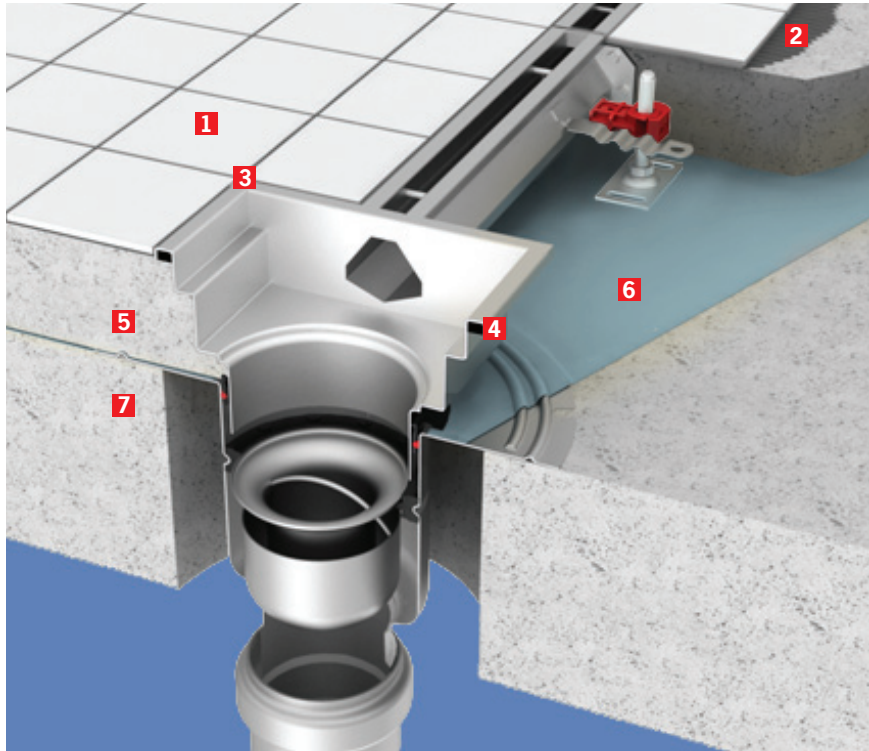
- 1** Epoxy/resin floor
- 2** Floor screed
- 3** Rubber infill
- 4** Solid concrete floor slab
- 5** Compacted soil



ACO modular slot channel

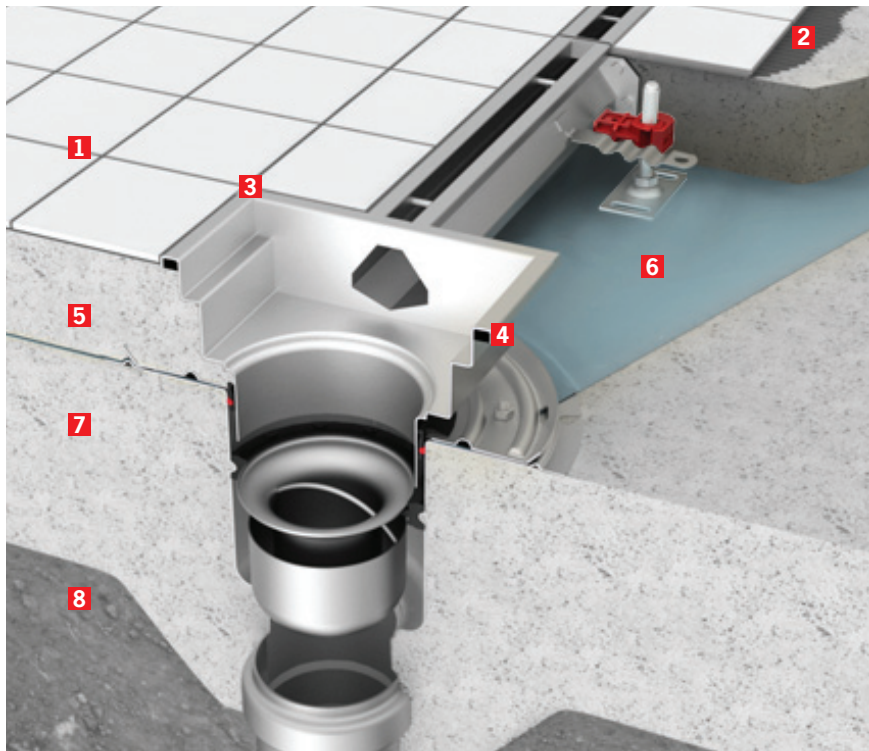
ACO modular slot channel standard type – ACO hygienic gully with adhesive bonding flange (Tiled floor)

- 1** Ceramic tiles
- 2** Tile cement
- 3** Mastix sealant
- 4** Rubber infill
- 5** Floor screed
- 6** Water proof membrane
- 7** Solid concrete floor slab



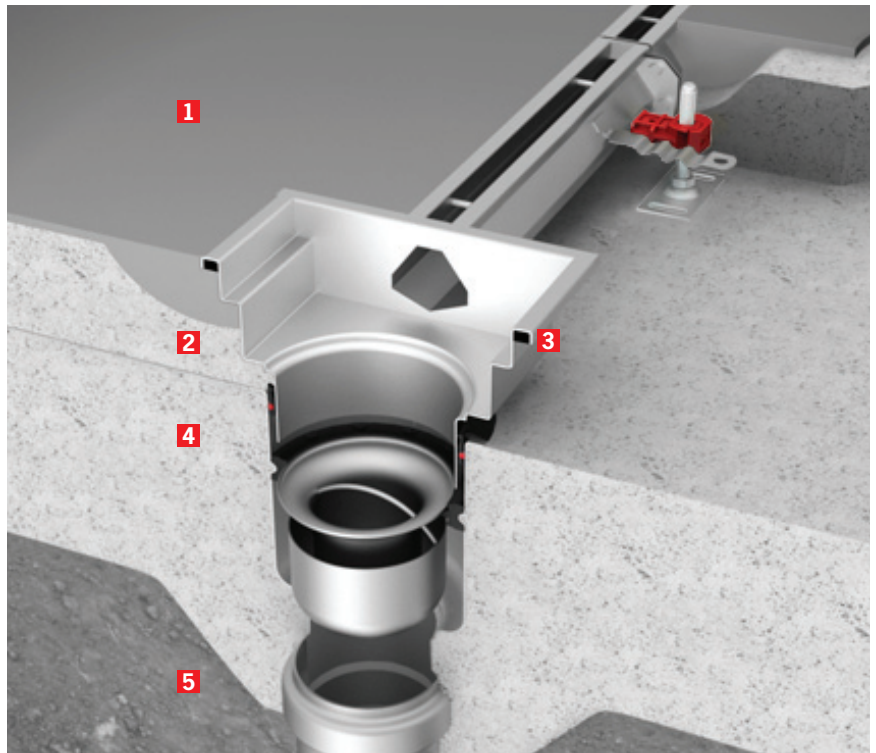
ACO modular slot channel standard type – ACO hygienic gully with mechanical clamping flange (Tiled floor)

- 1** Ceramic tiles
- 2** Tile cement
- 3** Mastix sealant
- 4** Rubber infill
- 5** Floor screed
- 6** Water proof membrane
- 7** Solid concrete floor slab
- 8** Compacted soil



ACO modular slot channel standard type – ACO hygienic gully with location flange (Resin floor)

- 1** Epoxy/resin floor
- 2** Floor screed
- 3** Rubber infill
- 4** Solid concrete floor slab
- 5** Compacted soil



ACO pipe

Generally

The following standards will help designers to select the correct size of pipe system for a particular application: EN 12056: gravity drainage systems inside buildings. EN 752: drain and sewer systems outside buildings. Installation should be in accordance with the manufacturer's recommendations as well as with EN 12056-2, EN 12056-3 and EN 752.

Pipe cutting

If it is necessary to adapt or shorten pipe lengths where tools are used, the cut must be square, clean and chamfered.

Suitable cutters are available from ACO.

These tools are designed to form the edge bevel on the male spigoted end of the pipe. Carbon steel cutting wheels are not suitable.

Pipe jointing

The assembly of pipe joints is quick and straightforward requiring only a light application of lubricant available from ACO to the chamfered pipe end. Ensure that the matching ends of the pipes and fittings are clean and free from contamination. Push-fit the pipe end into the socket, but do not push fully into the socket recess so as to allow for thermal expansion within the system.

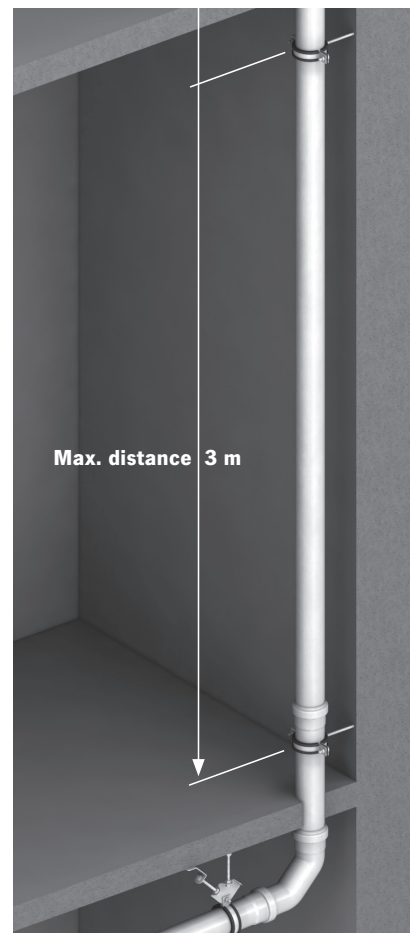


Vertical pipe stacks

The load applied with a fluid in the pipe is vertically down. Position the highest bracket adjacent to the top inlet of the pipe, then mount brackets at 3 meter spacings. At the bottom of the vertical pipe, use a bracket within 200 mm of the bottom. Fit brackets at each change of pipework is direction or junction points. Pipework should be at least 30 mm from the wall to facilitate maintenance and painting.

Pipe weights

Engineers should be aware of minimum and maximum weights when designing vertical stack and horizontal pipe run systems. Generally, when the pipe is completely full of water, then the vertical deflection of the pipe between brackets should not exceed 1.5 mm. The discretion of the installer should be applied in each instance to ensure that the pipe is adequately supported.



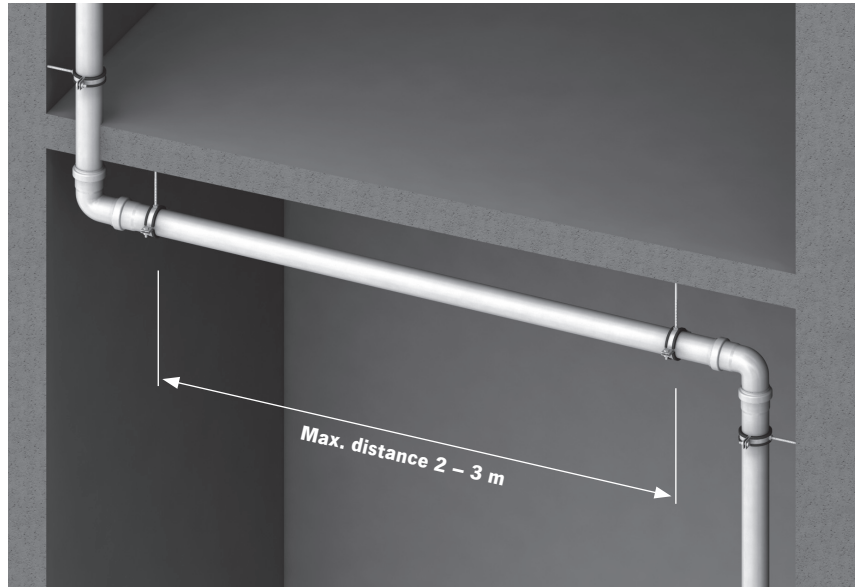
Horizontal pipe runs

As a guide, use the table below for bracket spacing on horizontal pipes.

Pipe diameter bracket spacing*

Pipe Ø [mm]	Length [m]
50	2.0
75	2.3
110	2.5
125	3.0
200	3.0
250	3.0

Recommended distances; for installation follow your local standards.



Horizontal pipework should be supported by pipe brackets in 3 meter intervals maximum. One bracket should be within 300 mm of the pipe joint and the other approximately at the midpoint of the pipe length, but not more than 3 metres from the next bracket (depending on the pipe diameter- refer to the upper table).

Additional brackets should be used at changes of direction and at junction points

immediately downstream of the fitting. Horizontal pipe runs may be installed at a fall of 1 in 50 and feeder connections should be achieved using 45° branches. Where long pipe runs occur i.e. greater than 15 meters, a fixing arm should be attached to the bracket to prevent pendulum movement within the system.

Bellow ground installation

Back-filling

Back-filling around the pipe can only start when the position of the pipe has been checked and approved.

Compression

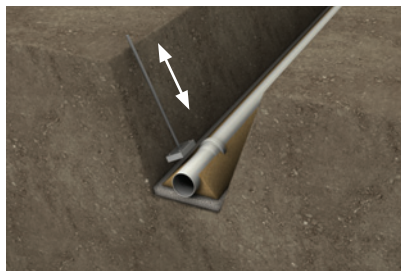
Care should be taken to avoid distortion of both the pipe run and the pipe itself during back-filling and compaction. Avoid tipping backfill material directly onto the pipe system. If mechanical compaction is used, the weight and resultant compressive force must be taken into account to avoid distortion. Back-fill materials should be compacted to a minimum of 93%.

Filling in the excavation

Soil from the excavation can be used for filling, but larger stones and blocks should not be used. Compression of the filling material outside reinforced areas is not necessary if the settling will not cause problems or damage.

Local standards

It is recommended to install pipes according to local standards.







Appendix	Appendix	Page
		232

Material

Material

Resistance of material

1 = Very good service to operating limit of material 2 = Moderate service 3 = Limited or variable service 4 = Unsatisfactory	AISI 316 L Stainless	AISI 304 Stainless	EPDM	NBR	FPM
Acetone	1	1	1	4	4
Acetic acid (diluted) 30%	1	1	1	2	2
Acetic acid 100%	1	1	1	3	3
Acetic acid anhydride	1	1	2	3	4
Aluminium chloride	4	4	1	1	1
Aluminium sulfate	1	4	1	1	1
Ammonium carbonate	1	1	1	4	-
Ammonium chloride	2	3	1	1	-
Ammonium hydroxide	1	1	1	4	2
Amyl chloride	1	1	-	-	-
Anilin	1	1	2	4	3
Anilin hydrochloride	4	4	2	2	2
Barium chloride	2	2	1	1	1
Barium hydroxide	1	1	1	1	1
Benzaldehyde	1	1	1	4	4
Benzene	1	1	4	4	1
Benzoic acid	1	1	-	-	1
Borax	1	1	1	2	1
Boric acid	1	1	1	1	1
Bromine	4	4	-	-	1
Bromine chloride acid	4	4	1	2	1
Bromine hydrogen acid	4	4	1	4	1
Bromoethylene	1	1	-	-	-
Butanol	1	1	4	1	1
Butyl acetat	1	1	2	-	4
Butyric acid	1	1	-	-	-
Calcium bisulfate el sulfite	1	1	4	1	1
Calcium chloride	2	2	1	1	1
Calcium hydroxide	1	1	1	1	1
Calcium hypoklorite	2	3	1	3	1
Carbon disulfide	1	1	-	-	-
Carbon tetrachloride	1	1	4	3	1
Chloracetic acid (mono)	4	4	2	-	-
Chloride	4	4	-	-	-
Chloril acid	4	4	-	-	-
Chlorine (dry)	1	1	-	-	1
Chlorobenzene	1	1	4	4	1
Chloroform	2	2	4	4	1
Chlorosulfonic acid	2	3	4	4	3
Copper chloride	2	2	1	1	1
Copper nitrate	1	1	-	-	-
Copper sulfate	1	1	1	1	1
Ether	1	1	-	-	-
Ethyl chloride	1	1	1	1	1
Fatty acid	1	1	4	2	1
Flouiner (dry)	1	1	-	-	-
Flourine hydrogen acid	4	4	2	4	1
Formaldehyde	1	1	1	2	1
Formic acid	1	1	1	2	3
Furfural	1	1	2	4	4
Gallic acid	1	1	2	2	1
Hydrochloric acid	4	4	1	4	1
Hydrogen peroxide	1	1	3	4	2
Iodine (wet)	4	4	-	-	-
Lead acetate	1	1	1	2	-

Note:

Concentration levels and length of exposure have a direct influence on the resistance of stainless steel to certain chemicals. Each application should therefore be carefully reviewed to determine the suitability of stainless steel.

Assumptions:

Data presented are used as a guide only, for detailed information please contact our Sales/Technical department.

Resistance of material

1 = Very good service to operating limit of material 2 = Moderate service 3 = Limited or variable service 4 = Unsatisfactory	AISI 316 L Stainless	AISI 304 Stainless	EPDM	NBR	FPM
Magnesium chloride	2	2	1	1	1
Magnesium sulfate	1	1	1	1	1
Mercury	1	1	1	1	1
Methanol	1	1	1	1	3
Methyl chloride	1	1	3	4	1
Methylene chloride	2	2	4	4	2
Natphalene	1	1	4	4	1
Nickel chloride	2	2	1	1	1
Nickel sulfate	1	1	1	1	1
Nitric acid	3	3	3	4	1
Oxalic acid	3	3	1	2	1
Perchloric acid	4	4	2	-	1
Phosphoric acid	1	1	2	4	1
Picric acid	1	1	2	2	1
Potassium bromide	1	1	-	-	-
Potassium carbonate	1	1	-	-	-
Potassium chlorate	1	1	-	-	-
Potassium cyanide	1	1	1	1	1
Potassium hydroxide	1	1	1	2	2
Potassium nitrate	1	1	1	1	1
Potassium permanganate	1	1	-	-	-
Potassium sulfate	1	1	1	1	1
Potassium sulfide	1	1	-	-	-
Potassiumchloride	2	2	1	1	1
Propylene dichloride	1	1	-	-	-
Sal ammoniac	2	3	1	1	-
Silver nitrate	1	1	1	2	1
Soda (ash)	1	1	-	-	-
Sodium acetate	1	1	1	2	4
Sodium bicarbonate	1	1	1	1	1
Sodium bisulfate	1	3	-	-	-
Sodium bisulfite	1	1	1	1	1
Sodium bromide	2	2	-	-	-
Sodium chlorate	1	1	-	-	-
Sodium chloride	4	4	-	-	-
Sodium cyanide	1	1	1	1	1
Sodium fluoride	1	1	-	-	-
Sodium hydroxide	1	1	1	2	2
Sodium hypochlorite	4	4	2	2	1
Sodium nitrate	1	1	1	2	-
Sodium sulfate	1	1	1	1	1
Sodium sulfide	1	1	-	-	-
Sodium sulfite	1	1	-	-	-
Stannous chloride	2	3	2	1	1
Sulfur	1	1	1	4	1
Sulfur chloride	1	1	4	3	1
Sulfur dioxide	1	2	1	4	1
Sulfuric acid	4	4	2	4	1
Sulfurous acid	1	3	2	2	1
Tionyl chloride	1	1	4	-	1
Toluene (toluol)	1	1	4	4	1
Trichloroethylene	1	1	4	3	1
Turpentine	1	1	4	1	1
Xylene (xylol)	1	1	-	-	-
Zinc sulfate	1	1	-	-	-

Note:

Concentration levels and length of exposure have a direct influence on the resistance of stainless steel to certain chemicals. Each application should therefore be carefully reviewed to determine the suitability of stainless steel.

Assumptions:

Data presented are used as a guide only, for detailed information please contact our Sales/Technical department.

Sealing material information

EPDM (ethylene propylene diene monomer)

Black sealing rubber ring, which is suitable for most applications where there are no oil or petrol residues in the waste water.

NBR (acryl nitrile-butadiene rubber)

Black sealing rubber ring which is suitable for waste water applications where there are petrol or oil residues. NBR is not resistant to solvents and high temperatures.

FPM (fluoroelastomer) – Viton®

Green sealing rubber ring which is suitable for special applications where oil, solvents and strong acids are present in waste water; and for applications with higher temperatures. Viton® seal has limited resistance to chemicals like acetone, methyl alcohol.

Rubber type	Sealing materials		
	EPDM	NBR	FPM (Viton)
Colour	black	black	green
Temperature range	-50 / +130 / +150 °C	-30 / +80 / +100 °C	-20 / +200 / +300 °C
Resistance			
Water	excellent	good	good
Chemicals			
Acids	good	fair	excellent
Bases	good	fair	excellent
Benzene/Petrol	unsatisfied	excellent	excellent
Oils			
ASTM Oil No. 1	unsatisfied	excellent	excellent
ASTM Oil No. 3	unsatisfied	excellent	excellent
Ozone & weather stresses	good	limited	good

To be sure of suitability for special applications please consult exact seal material features within ACO installation guide.

Notes

This image shows a full page of blank graph paper. The grid consists of thin, light gray horizontal and vertical lines that intersect to form small squares across the entire surface. There are no margins, text, or other markings on the paper.

ACO Industries k.s.

Havlickova 260
582 22 Pribyslav
Czech Republic

www.aco.com

ACO. The future of drainage

All reasonable care has been taken in compiling the information in this document. All recommendations and suggestions on the use of ACO products are made without guarantee since the conditions of use are beyond the control of the Company. It is the customer's responsibility to ensure that each product is fit for its intended purpose and that the actual conditions of use are suitable. This brochure and any advice is provided free of charge and accordingly on terms that no liability (including liability for negligence) will attach the Company or its servants or agents arising out of or in connection with or in relation to this brochure or any such advice. Any goods supplied by the Company will be supplied solely upon its standard conditions of sale, copies of which are available on request. The Company's policy of continuous product development and improvement renders specifications liable to modification. Information provided in this brochure is therefore subject to change without prior notification.